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LABELS

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The label on every package of food we buy has a meaning in dollars and cents for consumers from one end of the country to the other. Some sixteen years ago manufacturers of foodstuffs could—and often did—print with impunity grossly misleading statements on the containers in which their wares were sold. Nowadays, however, thanks to a vigorous enforcement of the Federal Food and Drugs Act and the various State pure food laws, most packages of food are branded to give a true idea of the nature of their contents.

Of course, we still have with us, and probably always shall have, manufacturers who either through ignorance or through wilful intent misbrand the food which they prepare for market. Such manufacturers are constantly being shown the error of their ways. The unscrupulous ones who seek to advance their own interests at the expense of the consuming public are often penalized so severely in the courts that in the long run their ill-gotten gains prove a loss.

For the food industry of the United States as a whole to obey the demands of the law that all labels on foodstuffs shall be truthful is only half the battle. No matter how closely the printed statements on containers may adhere to the truth, what good are they unless they are carefully and intelligently read by those who should be most interested in them? Far too many people still trustfully carry home, sight unseen, the packages handed out across the grocer's counter. A careful scrutiny of the labels on these packages, plus a little quick mental arithmetic, might have led to an entirely different selection, to the advantage of the pocketbook.

A cursory glance at the pictures on labels will not suffice to reveal the true character of what goes home in the market basket. For example, a

large red tomato on a can may mean any one of a number of things, as explained by the less showy printed matter in the label. Perhaps the can contains tomatoes put up whole or in solid pieces, or it may hold tomatoes in the form of pulp, purée, or paste. In choosing between two cans each bearing such a large red tomato, supplemented in one case by the words, "Tomatoes with Purée from Trimmings," and in the other by the words, "Solid Pack Tomatoes," the cheaper can may at first thought seem to be the more economical. Although it doubtless will cost more, the "Solid Pack" can should be entirely filled with tomatoes, while the other may be only partially filled with the solid product, the rest of the space being taken up by purée. This particular distinction applies almost entirely to tomatoes canned on the Pacific coast; practically all those put up in the East now are of the "Solid Pack" variety.

Corn in cans is usually packed either in the cream style or in the whole-grain style. Disappointment upon opening the can may be avoided by reading the label before buying.

In the process for preparing cream corn the kernels are cut off and the milky portion is scraped from what remains on the cob. The cut and scraped corn is mixed with sweetened brine and canned as a thick creamy substance which shows no separation of the liquid portion. Because this method originated in Maine, corn so prepared is sometimes called "Maine Style," but it may be labeled "Maine" or "Maine Style" only when it is put up in Maine. By the other, or whole grain, method of canning corn, the whole kernels are packed in brine. This originated in Maryland and canned corn may be called "Maryland" or "Maryland Style" only when put up in that state.

Labels on cans of peas and lima beans sometimes bear the words "Soaked Dry" or some equivalent expression. This means that the peas or beans had become so ripe and hard before being canned that it was necessary to first soften them by soaking.

Canned fruit may be labeled "Fancy," "Choice," "Standard," "Second," or "Pie." Their superlative titles and extra prices to the contrary notwithstanding, the "Fancy" and "Choice" grades will not satisfy the family appetite any better than the others. In actual food value, the difference between these grades is very slight. The chief distinction is the size and condition of the fruit packed and the strength of the sirup used. Cans labeled "Fancy" contain the choicest specimens of large, ripe fruit, even in color and texture, perfectly pitted and prepared, and packed in a very heavy sirup. For the other grades the fruit may be in smaller pieces and it may be packed in thinner sirup,

but it must be sound and properly prepared. Which grade is best to buy? The answer depends chiefly upon how far the family budget may be stretched to gratify the gastronomic sense.

All too often flavoring extracts are accepted with an utter disregard of the information given by their labels. It is easy to ask for a ten-cent or a twenty-five-cent bottle of vanilla, and let it go at that, with never a thought as to the source of the material thus obtained.

Extracts are prepared in two ways—from natural products or from chemical compounds. The label on the bottle or tube tells which. Only extracts that are made from the vanilla bean alone, with or without sugar or glycerine, are entitled to the designation "Vanilla Extract." But many of the flavoring preparations now on the market never came anywhere near a vanilla bean, while others contain only a very small proportion of the natural product. They are made largely, if not entirely, from vanillin and coumarin, which are synthetic compounds, chemically prepared. Thus, an extract designated "Imitation Vanilla Flavor—Vanillin and Coumarin—Caramel Color," or one sold as "Imitation Vanilla Flavor—Vanillin, Vanilla Bean, and Coumarin," is an artificial flavoring substance, containing in one instance caramel, to make it look like the natural product, and in the other a little vanilla bean. Flavors made from vanillin and coumarin, not colored with caramel, are usually sold as "Compound Vanilla Extract."

Lemon oil owes its flavor to citral and other substances which are soluble in dilute alcohol. They constitute about 10 per cent of the oil, the other 90 per cent being terpenes which have little or no odor or flavor. Terpeneless oil of lemon is oil from which all or nearly all of the terpenes have been removed. A terpeneless lemon extract may be made by shaking oil of lemon with dilute alcohol until the 10 per cent of soluble flavor-giving material is dissolved, or it may be made by dissolving terpeneless oil of lemon in dilute alcohol. A smaller quantity of alcohol is used in preparing terpeneless lemon extract than is necessary in making the standard extract, which must contain not less than 5 per cent by volume of lemon oil. It is safe to assume that a bottle labeled "High Grade Flavoring Extract of Lemon" contains standard, full-strength lemon extract, while one bearing the words "Terpeneless Extract of Lemon" contains a product which owes its flavor largely to citral extracted from lemon oil.

The word "Compound" or "Imitation" on a bottle of flavoring extract means that the preparation in question contains some substance other than the one required for the standard pure product. Such compounds

or imitations, of course, have their sphere of usefulness and, in many homes, are preferred to the true extracts. As a mere matter of curiosity, however, women should be interested in knowing whether the extracts on the pantry shelf are derived from a natural or an artificial source.

Labels on table oils also are extremely enlightening to those who pause long enough to read them. Naturally, pure olive oil costs more than cottonseed or corn oils. A heedless shopper may take home a can correctly labeled as cottonseed oil, "flavored with olive oil," or one called "Salad Oil," under the delusion that olive oil pure and simple is being bought at a reduced rate. Pictures of olive trees, Italian flags, and other devices prominently displayed on the containers, and cans resembling very closely those in which a well-known brand of olive oil is commonly sold, may temporarily blind the eye to the cold facts set forth in unornamental type. To make sure that pure olive oil is being obtained, if that is what is sought, a careful perusal of the labels is advisable.

Maple sirup, another product whose labels often fail to receive the attention due them, is made in two general ways. Sap from maple trees may be evaporated to a certain point and the resulting sirup shipped in liquid form. Or the sap may be evaporated further and cooled to form sugar which is shipped as a solid and later converted into sirup by being boiled with water. Sirup prepared by either of these two methods may enter the channels of trade as "Maple Sirup," "Pure Maple Sirup," "Maple Sap Sirup," or any similar name.

Some table sirups, however, contain only a small proportion of maple sirup and others contain none. As a rule, a product labeled "Table Sirup," with no indication of what its ingredients may be, does not come, even in part, from the maple tree. When the word "Maple," "Cane," or "Corn" appears on a label, the names of all the other ingredients must be given also.

Sirup may be had at a great variety of prices, with a wide diversity in composition, ranging from all maple, through mixtures containing the maple product in different proportions, to those which contain nothing from a maple grove. Usually the label tells the story which makes possible a wise selection, on the basis of price and quality.

Despite the general notion that all vinegar comes from pure apple juice, a great deal of it is made from alcohol from some cheaper source. A bottle labeled "Apple Cider Vinegar" should contain a product from apple juice, while one labeled "Distilled Vinegar, Colored with Caramel" probably would contain one made from alcohol derived from some other product. As vinegar of the second type is naturally almost colorless, caramel is sometimes added to make it look like cider vinegar.

As a rule, jelly owes its gelatinous consistency to the fruit from which it is made, not to added materials, such as pectin. In the case of some fruits, however, it is necessary to add pectin to make the product 'jell.' Jelly which has been stiffened by the addition of pectin must be clearly labeled so that it may be distinguished from jellies which contain enough pure fruit juice to give them the proper jelly-like body.

Even in the trade, some confusion exists as to how to differentiate between "Graham flour," "whole wheat flour," and "gluten flour." "Graham flour," named for Dr. Sylvester Graham, who first advocated its use, is made by grinding sound, clean wheat, without removing any portion or adding any stock from another mill run. The term "whole wheat flour," while sometimes applied to Graham flour, usually denotes a product consisting of the entire wheat berry, minus the coarsest bran substance. "Gluten flour" is made from wheat flour by removing a large part of the starch.

The Government standards require gluten flour to be the clean, sound product made from wheat flour by the removal of a large part of the starch and to contain not more than 10 per cent of moisture, and, calculated on the water-free basis, not less than 7.1 per cent of nitrogen, not more than 50 per cent of nitrogen-free extract, and not more than 44 per cent of starch. Any product offered for sale as gluten flour is deemed misbranded unless it comes up to these specifications.

Many mineral waters are sold, not as they come from a well or a spring, but with the addition of salts of one kind or another. Before the Federal Food and Drugs Act was passed by Congress, consumers of such waters were helpless in the hands of the bottlers. They had no way of knowing whether the bottled water they drank was artificial or not. Modern labels must disclose the presence of any additional salts.

An important requirement of the Food and Drugs Act, which many seem slow in using to their own advantage, is that the quantity of food in package form must be stamped somewhere on the container, in a plain and conspicuous manner, provided the package contains more than one-sixteenth of a pint if in liquid form or more than half an ounce if a solid.

Given two bottles of different sizes or shapes, each containing exactly the same product, is it safe to assume that the bottle which looks the larger contains the greater quantity? Not necessarily. The statements of quantity on the two bottles may show that the one which seems to be smaller really contains more than the other.

Again, peaches in a thirty-five-cent can may be just as good as those in a forty-cent can and the two cans may be identical in size. Perhaps, however, the statement of the quantity of the contents will show that the forty-cent can has in it enough more of the fruit to make it the better bargain of the two.

A fifteen-ounce carton of butter, correctly labeled though it may be, is often carried off as a full pound—simply from a failure to read the label. Two two-quart baskets of grapes selling at the same price may be plainly marked "3 Pounds" or "2½ Pounds," and still the unobservant buyer doesn't notice that one brings him more for his money than the other. Lard and cottonseed oil sometimes come in gallon cans marked "7½ Pounds"—only a little less than a gallon, it is true, but still a loss. Sacks of flour of the same make may have precisely the same outward appearance, except that one is branded "5 Pounds" and the other "6 Pounds." Catsups, sirups, and fruit butters are sometimes labeled in avoirdupois ounces and sometimes in liquid ounces, which weigh slightly more.

And so it goes all the way along the line. Labels give vital facts about foodstuffs, making it possible to know just what is being bought and how much of any one thing a dollar will bring. Unless they are carefully and intelligently read, however, labels, accurate though they may be, fail to accomplish their purpose.

THE EFFECT OF METHODS OF PREPARATION UPON THE VITAMIN CONTENT OF SPINACH

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The experiments here reported were planned to determine the minimum amount of spinach which will support normal growth and nutrition in young rats, when consumed raw and fresh, and cooked or preserved in various ways.

In all cases a basal diet was used which was known to be inadequate to support growth in the young rats and which was made up as follows: casein prepared according to Hammarsten, 15 per cent; commercial vegetable cooking fat, 10 per cent; corn starch, 72 per cent; salt mixture (Gulick's formula) 3 per cent. The fresh spinach used was such as is ordinarily purchased in the Columbia markets during the winter.

Except when otherwise noted the spinach was fed separately. The usual care was employed to keep the animals clean and to insure the comsumption of the desired quantities of food. The animals used were forty or fifty days old at the beginning of the tests.

SERIES I

In a preliminary series of experiments weighed quantities of basal diet were given to rats until growth ceased, and then spinach was added, the quantity being gradually increased until normal growth was obtained. The resulting growth curves are shown in Chart 1.

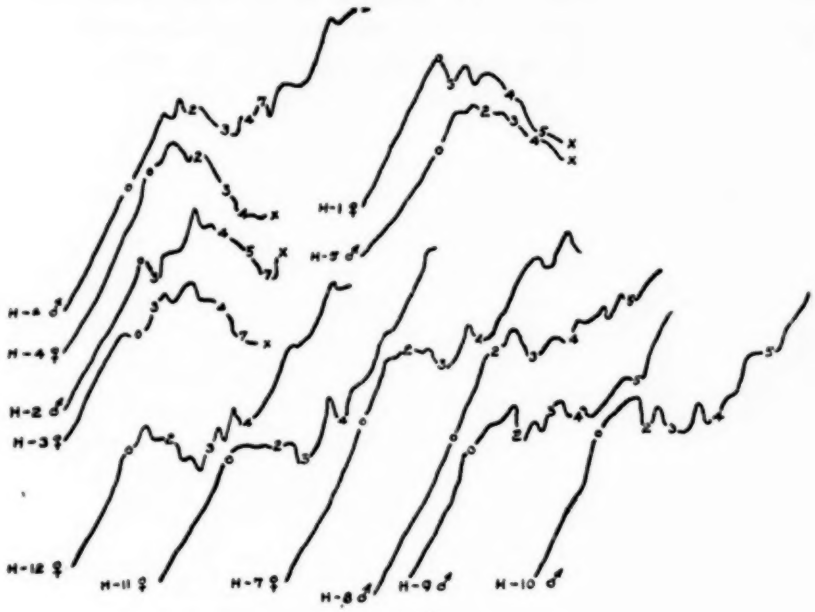

CHART 1. Growth curves of rats fed on raw fresh, boiled fresh, and home-canned spinach.
H-12, H-11, H-7, represent rats fed on raw fresh spinach.
H-8, H-9, H-10, represent rats fed on boiled fresh spinach.
H-1, H-2, H-3, H-4, H-5, H-6, represent rats fed on home-canned spinach.
O indicates point at which basal ration was first given.
Numerals indicate grams of spinach added to basal ration.
X marks death of animal.

Raw fresh spinach. In the three experiments with raw fresh spinach two grams of spinach were first added to the basal ration and this was later increased by 1 gram per week until 4 grams was reached, the amount found sufficient to produce and maintain normal growth.

Boiled fresh spinach. The spinach used was boiled 30 minutes in an open kettle with a small amount of water. Two grams of the boiled spinach was first added to the basal ration and this quantity was increased by 1 gram per week. Five grams of boiled spinach was required to support normal growth.

Home-canned spinach. During the first part of these tests spinach was used which had been canned with the addition of considerable water. It was gradually added to the basal ration as in the experiments already described. Rats receiving 3 or 4 grams of such spinach all lost weight and one died. Thereafter spinach was substituted which had been canned with no additional water. In the case of two rats the amount fed was increased to 5 grams and in the case of three others 7 grams, an amount equal to approximately one-half the total weight of the diet. Within 5 days all died except one. The survivor gained in weight for 25 days and then died.

Autopsies and microscopic examinations, made by Frances V. Guthrie of the Medical School, revealed very little as to the cause of death. The gross examination showed that the animals were emaciated, and their bones small and cartilagenous. The microscopic examination showed the presence of free blood in most of the tissues, cloudy swelling of the liver and kidneys, congestion of the lungs, kidneys, spleen, and liver, and cartilagenous ribs. The teeth and jaw bones seemed to be normally developed. The cloudy swelling of the liver and kidneys and the associated hemorrhagic condition of these and other organs would suggest that probably a toxin was a factor in producing these lesions, as there was no indication of infection.

SERIES II

In another series of experiments, the growth curves from which are shown in Chart 2, the effect of raw fresh spinach was compared with spinach cooked in streaming steam, at 10 pounds pressure, at 15 pounds pressure, and at 25 pounds pressure. In order to make the amounts comparable, the spinach was weighed raw and cooked one-half hour in test tubes without added water.

Raw fresh spinach. Four grams of raw fresh spinach was given to each of two rats, and vigorous normal growth was observed as in the previous experiment.

Steamed fresh spinach. Four grams was given to each of three rats, and growth was similar to that on raw spinach.

Spinach steam cooked at ten pounds pressure (240°F.). Four grams was given to each of three rats. Growth was satisfactory in two of animals but in the third it was much slower than with boiled or raw spinach.

Spinach steam cooked at fifteen pounds pressure (250°F.). Four grams was given to each of three rats. Two grew normally for 50 days, but were declining during the last 10 days of the experiment. The third

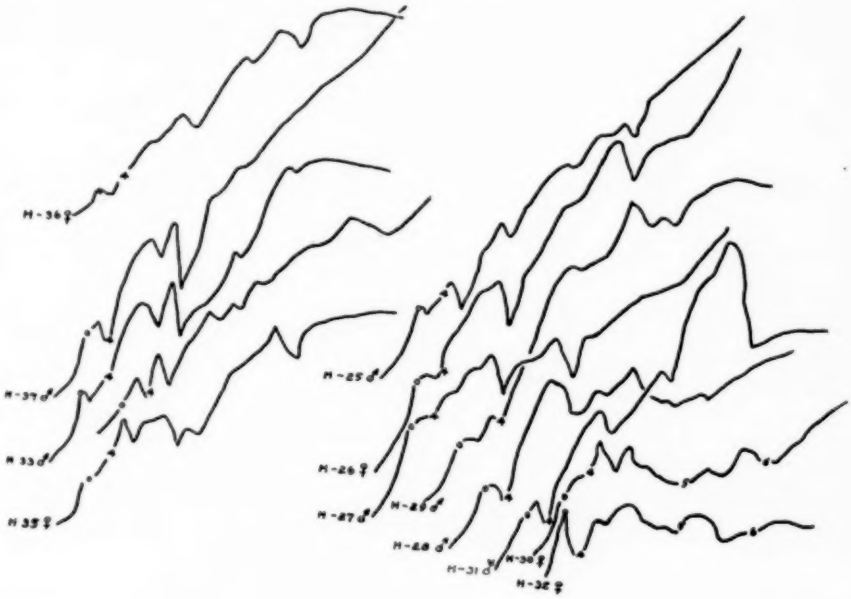

CHART II. Growth curves of rats receiving fresh spinach fed raw, steamed and cooked under pressures of 10, 15, and 25 pounds.

H-36, H-37, represent rats fed on raw fresh spinach.
H-33, H-34, H-35, represent rats fed on fresh steamed spinach.
H-25, H-26, H-27, represent rats fed on spinach cooked under 10 pounds pressure.
H-28, H-29, H-31, represent rats fed on spinach cooked under 15 pounds pressure.
H-30, H-32, represent rats fed on spinach cooked under 25 pounds pressure.
O indicates point at which basal ration was first given.
Numerals indicate grams of spinach added to basal ration.

grew normally for 10 days only, and maintained a fairly constant weight for the remaining 50 days.

Spinach steam cooked at twenty-five pounds pressure (267°F.). Four grams was given to each of two rats, and growth was very slight. At the end of 30 days the quantity was increased to 5 grams, but with no better results. After 25 days, the quantity was further increased to 6 grams, and some improvement was noted, but the growth could not be considered normal.

SERIES III

In another series of tests commercially canned spinach and commercially dried spinach were used; the growth curves are shown in Chart 3.

Commercial canned spinach. The spinach used was an excellent brand and seemed to have little added water. Since in the time available it was not practicable to determine the water content, the results of these

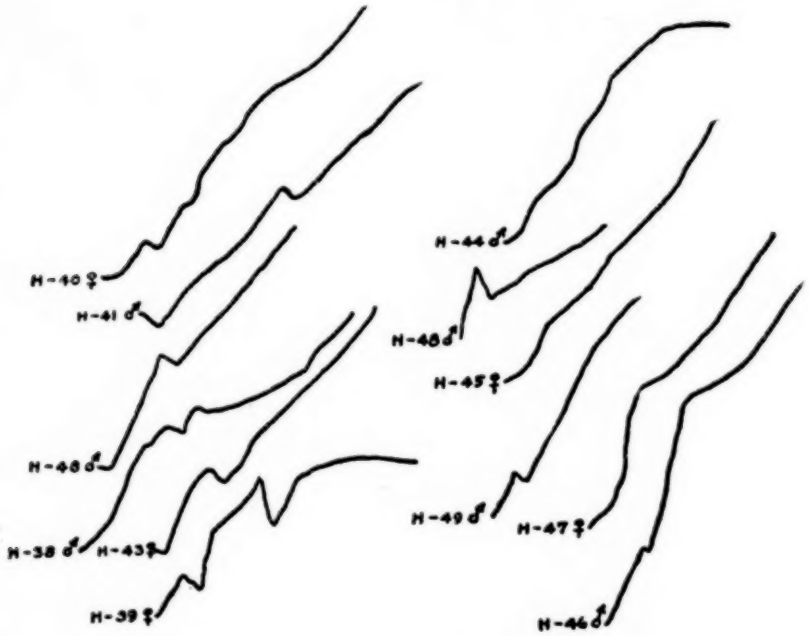

CHART III. Growth curves of rats fed on spinach commercially canned and dried.
H-21, H-22, H-23, H-24, represent rats receiving canned spinach.
H-8, H-9, H-10, represent rats receiving dried spinach mixed with basal ration.
H-7, H-11, H-12, represent rats receiving dried spinach soaked and fed separately.
O indicates point at which basal ration was first given.
Numerals indicate grams of spinach added to basal ration.
X marks point at which animal was killed for examination of tissues.

tests are not directly comparable with those obtained from fresh spinach. Growth was slow when 4, 5, or 6 grams of the spinach was given, six grams not producing normal growth. Males grew faster than the females.

Commercial dried spinach. Three rats received dried spinach mixed with the basal diet, the spinach forming 10 per cent of the total. This amounted to 0.7 grams of dried spinach and would correspond to at least

7 grams fresh spinach.[1] Three other rats received daily 1 gram of dried spinach (corresponding to at least 10 grams of fresh spinach) soaked in an excess of water for twenty-four hours, after which the water was discarded. None of the animals showed any appreciable gain in weight, but those receiving the soaked spinach declined slightly more than those receiving it dry. After five to six weeks on this diet a peculiar condition was noted in five of the rats. The tip of the tail appeared congested and swollen and in some cases dried up later and appeared dead. At the end of 90 days all six were still alive. None had made any appreciable gain in weight, and one weighed less than at the beginning.

Two of these rats were killed and examined histologically to determine if possible the cause for the condition of the tails. In the gross examination, the bones appeared cartilagenous as in half-grown rats, and showed a lack of calcium. Under the microscope they appeared normal. There was little visible fat. The tips of the tails were dark red and sharply demarcated. The histologist was unable to prepare these for microscopic examination. There was no evidence of an acute inflammatory process in the lymph glands. The spleen showed slight chronic passive congestion. There was very slight congestion of the kidneys. The heart and lungs showed no abnormality. The liver showed marked fatty changes.

SERIES IV

Since dried spinach thus appeared to be an unsatisfactory source of vitamins, it seemed desirable to find which of the vitamins were lacking, and another series of experiments was made in which other vitamin-containing foods were used in addition to the dried spinach. In all of these experiments the dried spinach was mixed with the basal diet and made up 10 per cent by weight of the total diet. Three rats received one and a half cc. of orange juice daily; three received 0.2 gram brewer's yeast daily; three received butter fat in place of the commercial vegetable fat in the basal diet; and three received both butter-fat in the place of the vegetable fat and one and a half cc. orange juice. Chart 4 shows the resulting growth curves.

These experiments were not continued sufficiently long to lead to definite conclusions. The rats receiving orange juice and butter made the most rapid growth and those receiving yeast made the least growth.

[1] According to Shorten and Ray (*Biochem. Jour.* 1921, 15: 274) all dried vegetables and fruits average about 10 per cent by weight of the fresh foods. The advertising literature of the brand used indicated that 1 gram dried spinach would correspond to 15 grams fresh.

This seems to indicate that dried spinach contains vitamin B, as adding the latter in the form of yeast did not increase growth; but that the dried spinach is deficient in both vitamin A and vitamin C.

CHART IV. Growth curves of rats receiving dried spinach supplemented by material supplying vitamins.

H-40, H-41, H-48, represent rats receiving orange juice.
H-38, H-39, H-43, represent rats receiving yeast.
H-44, H-45, H-48, represent rats receiving butter fat.
H-46, H-47, H-49, represent rats receiving butter fat and orange juice.

CONCLUSIONS

1. When spinach is the only source of vitamins, 4 grams of the raw fresh material as obtained in winter is the minimum amount which will support normal growth in young rats weighing from 60 to 100 grams.

2. Cooking spinach at boiling temperature for one-half hour does not cause any appreciable destruction of vitamin when no soda or seasoning is added and the liquid portion is retained.

3. When cooking is continued for the same length of time, temperatures higher than boiling seem to reduce the vitamin content of spinach, and the higher the temperature, the greater the effect.

4. Canned spinach seemed a less efficient source of vitamins than fresh.

5. Dried spinach cannot be depended upon as a source of vitamins; in the case of the brand here used there is no foundation for the claims that this product retains all the nutritive value of fresh spinach.

THE TEA-ROOM BUSINESS

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There is perhaps no business more preeminently a woman's field than that of feeding the public. There is no barrier, no prejudice, no tradition against woman's activity in the eating world. In many fields there is strong public opinion against women; a limited number may succeed in spite of it, but they must first overcome the thought in the mind of the public that a woman is not capable or adapted to that particular business or profession. They are the pioneers whose first job must be to make the clearing. In educating public opinion for women's entrance into the tea-room business the pioneer work was done by our grandmothers and great-grandmothers, and that woman's place is in the tea-room has been accepted as an inevitable corollary of 'woman's place is in the home.'

Another great advantage of the tea-room business is that it is a cash business. The cash on hand is the day's food supply, and by evening your profits are in the till. It is also a business of quick turnover and therefore especially adapted to the person of limited capital. Food is a necessity, not a luxury. It is also a commodity consumed in the using. When one sells a cookstove it may last a lifetime, so there are few 'returns,' no matter how satisfied the customer may be. But a good dinner eaten to-day usually means a return for another to-morrow.

No business is in general more inefficiently managed than the tea-room business. The larger restaurant and the hotel dining room are scientifi-

cally managed, but their starting point is different. The restaurant owner may have a purely commercial viewpoint, but the owner of a tea-room must have the home point of view, for it is just this home point of view, the home atmosphere, and the home-cooked food, that make tea rooms increasingly attractive the country over—and it is also this home point of view which is responsible, in part at least, for their inefficient management. The problem of the tea-room manager is to produce a home product, but if her business is to be a financial success she cannot manage it by home methods. Many of the capable housewives and also of the women trained in nutrition and food preparation who have consulted us in regard to starting their own business, have possessed an understanding of food which is a most valuable asset, but did not have the technique for the commercial handling of food. Knowing good food is a long way from knowing how to serve it at a profit.

Training of any kind will of course, never take the place of experience, but, on the other hand, it often takes a great many years of experience to gain what might have been gotten in a much shorter time through training. The engineer just graduated from college does not expect to be general manager of a big engineering company and takes whatever job he can get, but he has the background that enables him more easily and quickly to become general manager or owner.

One thing which training in the tea-room business should give is the opportunity to learn the business problems and point of view of the owner. One might work a great many years, even in a well-organized place, and never have more than a glimpse of the owners' viewpoint. One might see the working out of various principles, and, if one were fortunate, know the rules—but not the principle back of them.

One of the first and most important things in starting a tea-room is location. You may change your mind about the price you ask for your food, about the equipment, the cook, the method of service,—in fact about almost anything but the location. It is one of the chief factors in determining the class and volume of the business and these furnish the basis for all estimates of cost and receipts.

A mistake frequently made by the prospective tea-room owner is in estimating the number of persons who can be seated in a given space. This makes a great difference in the amount of rent she can afford to pay. She estimates perhaps forty and when she comes to the actual placing of the chairs finds she has thirty. By that time the lease is signed so there is nothing to do but make the best of it. A few figures will save readers of the JOURNAL, who may be potential tea-room owners, from

this particular mistake. It takes between nine and ten square feet to seat each person, allowing for the necessary aisle space. If there are 500 square feet for the dining room you can seat from forty to fifty people at one time, depending upon how close you wish to place the tables.

The volume of business depends partly on seating capacity and partly on the character of the location. Very few locations are equally good for three meals. Most tea-rooms have primarily either a luncheon or a dinner location, and while they may serve more than one meal they will not expect equally good patronage at all. In a city tea room which depends chiefly upon luncheon, the seats in the dining room should be filled three or four times. If the location is in a residential section where the patrons are away during the day, dinner will be the most popular meal. It is not possible to reseat a dining room more than about twice for dinner because of the greater length of time required to serve a course meal and the greater spirit of leisure.

When you know the number of people you can seat in your available space and the number of times you should reseat your dining room, you are in a position to estimate the amount of your daily receipts.

Rent should not exceed ten per cent of the gross receipts and at the end of a year the volume of business should be large enough to bring it down to six or seven per cent.

In selecting equipment there is great danger in over-equipping, especially if capital is limited. To avoid too great outlay on equipment one should not buy cheap equipment, but rather start with only the necessary things and add to the stock as the business grows; if it doesn't grow quite as rapidly as was hoped, the money will be in the bank to carry you over and not in equipment that may carry you under.

The length of the lease is a guide to the grade of equipment to be purchased. To buy equipment that will last much less or much longer is poor business. It should, of course, last as long as the lease holds, but the inexperienced buyer often does not appreciate the fact that it does not pay to buy a grade that will last longer. Though a great part of the equipment is movable, it is not likely to fit properly into another kitchen; one cannot afford a poorly arranged kitchen because this may mean an increase of ten to fifteen per cent in labor cost. Second-hand equipment has a very low market value. For these reasons expert accountants in the food business charge off a monthly depreciation on equipment which by the time the lease expires will have equalled the original cost.

The management of a tea room may be divided into buying, service, and production. While all these divisions are important, production presents the most difficult and complex problem.

It is not so hard to go wrong on buying as one might imagine. With the ordinary intuition of a woman, one will very soon discover that the wholesale food prices are given on a bargaining basis. Of course there is a minimum below which the salesman cannot go, but it is to his advantage to sell the goods at as high a price as he can without losing your business. The price a tea room can afford to pay for goods will depend somewhat on the prices which it can charge for the food it sells. The most flagrant error in buying that we have known was in a tea room where we were called in for consultation; its first invoice for canned goods amounted to $3000 and most of this was for higher-priced articles than could be sold at a profit in that particular place. It was only because the tea room had plenty of capital back of it that it was able to weather such a blow.

If you are buyer and manager both, spend very little time in going to market. It is a wasteful expenditure of time that is needed in supervising your production. Keep in touch with the market by going perhaps once a week or every other week. Always keep in mind that your time is your most valuable asset.

Good service indicates a well-organized, well-oiled machine. Your service as well as your food reflects your kitchen organization and management. The well-run dining room also requires systematic oversight. The training of waitresses in how to take orders, how to manage so that no one at the tables shall be kept waiting takes constant supervision and alertness. Some member of the staff should always be on the floor, and not just as a hostess greeting the guests, though that is important for creating an atmosphere of friendliness. She must also be responsible for the service and should be able to see at a glance whether each patron is supplied with a complete service or whether there are anxious patrons looking for their waitress.

The number of chairs allowed to a waitress is another important point in good service. For the busy meal when the dining room is reseated three to four times no waitress should be given over eight chairs, and a new girl should not have more than four until she becomes familiar with the menu and how to get her orders. Fewer chairs for each girl sometimes means smaller tips, but many waitresses find that their tips are as much from six chairs as from eight because of the better service they have been able to give. It is wise to give each waitress a particular station and

change these stations every week so that each girl has her chance at the best station. Some parts of the dining room are more desirable than others and therefore more constantly filled. The wall and corner tables afford more privacy and are always taken first.

How to produce good food without waste and how to train your cook to produce uniformly good food are the biggest problems in the tea-room business. When a tea room is not making money, the first question is "What about your food?".

Cooks and chefs are generally uneducated, untrained people, and if left to their own devices their cooking is a matter of luck. For that reason we have found it necessary to standardize our recipes. One of us has made the dish before the recipe is given to the cook and so we know exactly what the result should be, no matter what cook uses the recipe. Merely having standardized recipes will not, however, insure a standardized produce; that requires constant supervision. Because of ignorance or carelessness the recipes will not be accurately followed unless you insist upon it. We try to ascertain what mistake the cook made by going over the recipe with her, but usually she says she followed the recipe. Few cooks belong to the unusual type of person who will admit having made a mistake. The next time the dish is to be prepared one of us makes it with her, and that is usually the end of failures with that recipe. If a dish is a failure we do not serve it.

Standardized food not only means uniform costs, but a standing line of patrons. Nothing gives a manager greater pleasure than the fact that people are willing to stand and wait for seats in her tea room. To feel that the quality of the food makes it worth standing and waiting for is the highest compliment the public can pay her and one they are sure to give if she serves uniformally good food with good service and a spirit of friendliness thrown in. If to this combination she adds technical knowledge of business methods and management she cannot fail to put her enterprise on a profitable basis.

PREVENTIVE FEEDING FOR MOTHERS AND INFANTS*

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We all agree that every child has the right to be well born, well nourished, and well cared for, three general headings which should include all the essentials at least for physical well being. While intelligent parents would accept this as a fundamental truth, most of them would consider that clean heredity was the only part to be safe-guarded in the prenatal period. Yet the first year of a baby's life, the twelve months before he is born, is undoubtedly the period most neglected in regard to both care and feeding.

Pregnancy is largely a problem of nutrition, yet most of us, if not ignorant of the basic principles of this science, have failed to make practical application of them. In spite of the convincing observations in animal husbandry and the corroborating evidence furnished by the nutrition laboratories, it has been difficult to make either the lay public or the medical profession appreciate the fact that the pregnant or nursing woman is a higher mammal and must react to grave dietary insufficiency or inadequacies much as do animals used for experimental purposes.

In most states, the farmer is supplied with scientific bulletins giving the result of years of careful experimentation. Our women, on the other hand, are supposed to be either bored or scared by anything but the most popular presentation of the facts concerning life and growth. Surely the mother to whom is intrusted both the bearing and rearing of children should be interested and intelligent enough to grasp at least the fundamental principles of nutrition.

My own experience in contact with young mothers in extension work and through health centers bears out this assumption. I have found the average young mother eager both to know how and to learn why she should care for and feed her child in a prescribed way. Her ability to carry out directions intelligently I believe to depend largely on whether or not she understands the reason for each step in the procedure.

The following essential facts should be more widely understood, if women are properly to fulfill the obligation nature has imposed on them:

1. The pregnant animal is much more susceptible to insufficient or inadequate diet than the one not subject to such strain. A woman

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may exist apparently in good health on a diet upon which she can not properly nourish a baby before or after birth.

2. Maternity should be prepared for. Not every woman or a woman in every year of her child-bearing period is in the proper condition to give the right prenatal environment or to furnish the proper nutriment to a child. Women who are under special nervous strain, who have temporarily to do an excessive amount of work, specially outside the home, who are depleted physically, who can not have or can not take the proper food, should not attempt maternity. Almost surely, the result of a pregnancy under such conditions is either to exhaust the mother or to handicap the new-born child.

3. During pregnancy, proper prenatal hygiene and feeding is essential to the life and normal development of the unborn child. To count on the fact that the mother is a factor of safety in the nutrition of the young, and to nourish the child either at the expense of the pregnant or nursing mother is an unnecessary sacrifice of the woman and may at any time prove disastrous to the child.

4. During lactation, "in order that breast milk may actually show the superiority that we are accustomed to expect of it, the attention paid to maternal feeding should take account of the food consumed by the mother as well as to the extent the mother nurses the child" (1). We might enlarge this statement to include the food consumed by the mother during pregnancy, as well as during lactation, for there is every reason to believe that ability to produce breast milk of a superior quality is to some extent dependent on the storage of material from the mother's food during the prenatal period, as well as on the supply of nutrients from the food she receives during lactation.

It would be impossible to summarize here the disastrous effects that have been produced experimentally on mother and on offspring by feeding pregnant animals diets deficient either in energy, in quality of protein, in the inorganic salts apparently most essential for normal growth such as the salts of calcium, phosphorus, or iodine, or in the essential vitamins. All that can be attempted is to point out the result of deficiency diet in maternity and some evident analogies between the improper nutrition of the human mother and deficiency feeding of animals.

The results in the human mother of bad nutrition are usually attributed to some more striking but often only incidental or contributing cause. Undoubtedly prematurity and miscarriage are not infrequently due to dietary deficiencies (probably in vitamins or inorganic salts) while the cause is put down as a fall, excitement, or trivial ill-

ness. As Dr. Maxwell (2) suggests in his report of a case of food deficiency in China which simulated the toxemia of pregnancy, maternal feeding may produce sterility and contribute to a high abortion rate, as well as cause manifestation of deficiency disease in the woman herself. We may not yet be certain whether or not a special vitamin is responsible for fertility, but the harmful influence of marked inadequacy in the mother's diet on the completion of pregnancy is not only to be expected from animal experimentation but seems fully corroborated by experience of women in countries poverty-stricken by war or famine.

The effect of long undernourishment of mothers in Central Europe as a result of the World War has also been shown to affect the birth weight of the new-born (3 and 4), the ability to produce milk, the quality of the milk produced (5), and the appearance of rickets in the offspring, as well as osteo malacia (hunger rickets) in the mother herself (6).

Now that rickets is acknowledged to be a disease of the first six months of life and breast milk has been proved to be deficient in the essential inorganic salts in those mothers whose breast-fed infants show rickets (7 and 8), are we not ready to take the further step of placing the blame of many cases of rickets on prenatal feeding? No more striking or conclusive evidence of the role the mother plays in the nutrition of the infant, and of the importance of an abundance of calcium and the anti-rachitic factor in the prenatal diet could be given than by a case reported to Korenchevsky (6) by Drs. Dalyell and Mackay in their Vienna study of 1920:

> In a foundling institution in that city two infants were observed, the first born of a healthy mother and the second of a mother suffering from osteomalacia (hunger-rickets). The mother of the first acted as foster mother to the second, with the exception of the earlier weeks of life when both infants were completely nourished by their own mothers, they received identical diets consisting of breast milk from the healthy woman, supplemented by one or two bottles of cow's milk daily. The children were born in July and August respectively, and by the middle of December severe rickets was observed in the second child at four and one half months old, and in spite of treatment with codliver oil stigmata of rickets persisted until the following March when the child was nine months old. The first child remained healthy and developed normally.

The occurrence of beri-beri (9), scurvy (10), rickets (11), pellagra (12), and goiter in infants the first weeks after birth, as well as in older nursing infants throws a startling emphasis on the need of adequate maternal

feeding. From such striking effects of deficiency diets we may realize that women must be specially fed to produce normal, healthy children and that, as Dr. McCollum (13) has so well stated, there are "large groups of people whose diets are of such a character that the quality of the milk produced by the lactating mother is not such as to make it a satisfactory food for their infants." It is surely time that we used the observations and experiments on domestic and laboratory animals to safeguard maternity.

We must give up the present prevailing view that the pregnant mother's diet can be left safely to chance or to the whims of her appetite and no longer counsel her to 'eat what she is accustomed to' or 'plenty of good nourishing food.' We must realize how fallacious it is to believe that if a woman can produce enough milk the quality of her milk will be satisfactory regardless of her food. It is as absurd to expect a mother living on a limited or deficient diet to build a baby or to nourish it successfully after birth as to think that a goat can produce milk on a tin-can diet. These dangerous, familiar generalizations might hold in a majority of cases if we were not removed from our natural environment and were not living largely on devitalized food stuffs and, as Professor Lusk has so aptly said, in glass cages which filter out the essential light rays. We can no longer be sure that an apparently healthy woman can produce a normal baby, or that every mother can give good breast milk, or that breast milk can be used safely as the sole food for a child the first six months of life.

The amount and kind of food required to maintain an adequate milk supply is far more generally understood than what constitutes a balanced diet during pregnancy. Because of this and because there are no essential differences in the character of the diet of the pregnant and lactating woman, I shall limit myself here to a brief discussion of what should be included in every prenatal diet.

The first dangerous statement that we meet in regard to feeding in maternity is that the pregnant woman does not have 'to eat for two.'

It may be wise and necessary to curtail the carbohydrates of the diet during the third month of pregnancy (14) to avoid the possibility of an over-large baby. There is no doubt that the gain in weight of the pregnant woman should be carefully controlled and kept within normal limits (15). Many women at the beginning of pregnancy are, however, in a state of undernutrition and may require a considerable increase in both energy and tissue-building foods. Also, the energy requirement of a woman toward the end of pregnancy is considerably above that of the

same woman in the non-pregnant condition (16), the difference corresponding to the additional energy necessary to maintain the fetus and the specially-developed surrounding tissues, the added weight of which amounts finally to about 20 pounds. It is obvious, then, that the average woman who was not eating too much before pregnancy would need a considerable increase in her daily food unless her body stores are to supply this additional energy required.

Even if the mother's tissues can be called upon to furnish energy, cutting down the total food calories may endanger the proper use of the growth material of the diet, which is after all the essential part of the food either in pregnancy or lactation. Protein may be used for energy purposes and the supply for the fetus curtailed, while the necessity of fat in proper kinds and amounts, both as a source of certain vitamins and to promote the use of the inorganic salts furnished in the foods, has been strikingly demonstrated recently. We are beginning to realize that the full effect of bad prenatal feeding can not be told at birth. The growth needs of the fetus can not be measured by calories. Nor is the increase needed in the diet of the average American mother to meet the demands of pregnancy and lactation solely in energy foods.

There is every reason to believe that the adequacy of the protein, the mineral elements, and the vitamin content of the food must all be watched and usually augmented over and above what was previously needed by the same woman and with the same activities if she is to nourish adequately a baby before or after birth.

The addition to the daily calories needed in pregnancy, which in an active woman may be as much as 500 calories, should, in my opinion, be largely in milk, eggs, fruit, and vegetables. Fortunately milk is well borne in pregnancy, even in the toxemias, and, since it is our chief calcium food, the daily diet of every pregnant woman may well include a quart of milk. It is practically impossible to secure enough calcium in the mother's diet unless she takes at least a pint of milk.

It is true that calcium lactate or carbonate may be given and perhaps should be given in pregnancy, but because of the complete nature of the proteins of milk and the character of its mineral and vitamin content, there is no substitute for milk in the average diet in pregnancy, lactation, or the artificial feeding of infants.

The foods listed in the table given beyond make up part of the daily diet during pregnancy; they will insure a good calcium and vitamin intake, considerable high grade protein, and at least one third of the total calories needed by the average normal mother.

FOODS ESSENTIAL AS PART OF DIET IN PREGNANCY

KIND AND QUANTITY OF FOOD	ENERGY SUPPLIED	CALCIUM SUPPLIED
	calories	*grams*
1 quart of milk	650	0.94
1 egg	70	0.03
1 raw vegetable salad, such as lettuce, celery and tomato	50	0.05
1 citrus fruit	100	0.1
1 cooked green vegetable	25	0.05–0.1
2 slices entire wheat or graham bread or 1½ ounces whole grain cereal	150	0.02
	1045	1.19–1.24

If a helping of lean meat, potato, and three servings of butter and cereal or bread are added to these foods, a diet sufficient in calories and adequate except possibly in iodin, will be furnished a normal mother. More fruits and vegetables may be substituted in place of additional carbohydrates, if the energy needs to be curtailed.

The minimum of body-building material as given in this table can not be safely decreased for it is used not only for the construction of the fetus and the enlargement of the specialized maternal tissues, the uterus and mammary glands, but, according to Wilson and Hoffström (17), is stored in the mother's body in anticipation of the coming drain of labor and lactation.

The depletion of blood urea recently reported (18) during the mid-period of human pregnancy, the period of greatest growth of the fetal skeleton, muscles, and organs, corresponds to the greatest drain of nitrogenous material from the mother and reaffirms the importance of an abundance of high-grade protein during the entire period of pregnancy. The recent report of the Committee on Nutritional Problems of the American Public Health Association (19) shows conclusively that the chief deficiency in the average American dietary is in calcium. As Toverud points out (20), there is probably no period in mammalian life when the organism is in such great need of calcium as during pregnancy: "It is a well known fact that the pregnant period for many women is a very harmful one as far as teeth is concerned. The old adage 'one tooth for every child' is certainly true now for a large class of women both in America and Europe."

Evidence is also piling up that the calcium needs are greatest in fetal life, just as it has been conclusively shown that the needs of the infant

for this essential substance are relatively greater than that of the child (6, 21). The fetal requirements for calcium are considerable even in the early months of pregnancy, since, according to Michel (22) and to Bar (23), the calcification of the first teeth is said to begin before the fifth month of pregnancy and the calcification of the first permanent molars (second set) before birth show a tremendous increase after 210 days of pregnancy. The daily fetal absorption of calcium during the last two months according to Bar is .638 gram of calcium oxide, an amount as great as the estimated daily requirement of calcium by the average adult (24). The lowering of blood calcium and phosphorus is also reported (25, 26, 27, 28, 29) as greatest during the last months of pregnancy, and corresponds to this increased fetal demand.

There seems to be good evidence, therefore, to estimate that the need of the pregnant woman for calcium is half again as much, if not twice as much, as that of the non-pregnant woman, or not far from 1.1–1.4 grams calcium daily (1.5–2 grams Ca oxide).

The role that the anti-rachitic vitamin and sunshine play in the use of calcium warrants the assumption that vitamin D as well as an abundance of calcium and phosphorus must be furnished in the diet of the pregnant woman, specially during the winter months in our cold climates. As Dr. Park suggests, "doubtless rickets actually begins in the case of many children immediately after birth—such cases make one hesitate to think rickets can not begin in intra-uterine life" (30).

The possible advantage of codliver-oil therapy during pregnancy to protect the offspring from rickets needs further confirmation, though the experimental work of Korenchevsky and Carr (31) would lead one to expect beneficial results from such a practice.

Another inorganic inadequacy which is common and as yet completely neglected is iodine deficiency, especially serious in the goiter regions of the United States. It has been proved to pig breeders in Wisconsin that a disease known as "hairless pigs" in which the mother pig aborts and produces a sickly and abnormal litter is due to lack of iodine in the food of the sow, and that the disease can be eliminated by adding this essential substance to the daily ration. Wisconsin is full of bulletins on this hog disease and yet fully fifty per cent of the young mothers in our health centers have a more or less marked enlargement of the thyroid gland, a considerable number of our young infants show a definite goiter, and about eighty per cent of adolescent girls in Wisconsin have marked thyroid enlargements. Iodin therapy in pregnancy is not generally practiced because of the prevalent fear that harm may follow its administration,

if the goiter is not of the simple or colloid form. It is the old story of not applying the evidence of animal husbandry to the human problem, and of hesitating to help the nine hundred and ninety-nine for fear that the thousandth individual may be injured.

Fortunately the U. S. Public Health Service has recently published an excellent article on this subject (32) which we hope will help to check the development of goiter in maternity. As Dr. Olesen there states, "during pregnancy iodine should be administered under the direction of the medical attendant, thereby preventing the development of goiter in the child as well as in the mother." We must not forget that the inorganic salts and vitamins needed by the fetus or the nursing infant can not be synthesized in the mothers' body but must be obtained from her food or from the store of such substances in her own body tissues. The mother does stand between her infant and nutritive disaster. The ability of the mother to furnish the necessary nutrient material for the growth of the baby, however, is limited in extent and duration. As far as the baby is concerned her power to do it successfully depends upon:

1. Her general health and state of nutrition before conception.
2. The amount, kind, and adequacy of her food.
3. The length of time she is called upon to support the growth of another organism. Frequent repetitions of pregnancy and the duration of lactation must be considered from the standpoint of the depletion of the mother as well as the normal development of the child.

Nourishment of the young at the expense of maternal tissues must sooner or later mean physical exhaustion, and may be at any time disastrous to the woman if she must pay for the health of her child in her own flesh and blood and teeth. The human mother, like any other, makes this sacrifice willingly, if it must be made, but no other animal is called upon to make it so heedlessly and unnecessarily.

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EDITORIAL

Who Chooses the Motion Pictures? In a recent issue, *The Motion Picture News* puts this question squarely up to the women of the country. Says Mr. William A. Johnston in a signed editorial,

There's an unmistakable seriousness in the opposition of women's organizations everywhere to the film founded upon the lurid sex novel.

There's an unmistakable seriousness, too, in the stand taken by Will H. Hays upon the same all-important question.

We have no right or call to speak for Mr. Hays in the matter: but we do feel that many others will be as satisfied as we are to know that with his feet squarely on the gound he is saying without the slightest equivocation: this sort of picture cannot be made. . . . .

The problem is a many-sided one.

It is an attractive commercial proposition to film the "sexy" book or play, attractive because of the huge and uncertain gamble in picture production. We wish the women of the country—the leaders in particular—understood better just how hazardous and baffling the business problems of production are.

We wish in particular that these very women would conscientiously and vigorously support the wholesome pictures they clamor for, and themselves stop paying money into the theatre box-office to see the pictures they so strenuously denounce. We earnestly hope that there is less hypocrisy among women over pictures than with men over the Volstead Act. . . . .

The motion picture theatre is a neighborhood theatre; it serves its community while its community is at home. It is an adjunct to, a part of the home. It impresses daily millions of people among whom the youth of the land is a majority part.

The problem, it seems to us, is equally up to the women of the country.

In our humble opinion, the vote is not of more consequence to them than is the motion picture.

It has been proven that where the women of a community interest themselves in the wholesome photoplay the exhibitor will book and make money on such pictures. This is the one sure way to cause the production of such pictures.

The Committee on Public Relations cooperating with the Motion Picture Producers and Distributors of America has asked all its member organizations to consider the question. The American Home Economics

Association is one of them. There can be no doubt where home economists stand on the question and there should be none as to how we, individually and collectively, will meet the responsibility.

Student Clubs. To promote the formation and development of clubs among home economics students in our schools and colleges is, according to the program of work, one of the chief aims of the American Home Economics Association for the year just beginning. Disinterestedness and self interest both show its importance to the development of the American Home Economics Association and of home economics in general. It will be stimulating to see what has been accomplished.

According to records in the office of the executive secretary, the 1923–24 roll of affiliated student clubs numbers 42, an increase of 28 over the previous year and their distribution by states is as follows: Alabama 1, Arkansas 1, California 2, Illinois 2, Iowa 2, Louisiana 4, Massachusetts 1, Michigan 7, Minnesota 2, Montana 2, Nebraska 1, New York 1, Ohio 4, Utah 12.

The membership varied from 10 to 468, this largest number reported from Iowa State College. All of the clubs have regular meetings each month or oftener. Aside from the social programs they have discussions of interest to home economics students. One club reports a carefully worked out plan to acquaint the students with the lines of work open to home economics trained women, and to give them information about the nursing service, the medical profession, and other fields.

The general aim of the clubs appears to be to promote good fellowship among home economics students, to assist in maintaining high standards of work, to broaden their interests, and to render service both to their own school and to the whole cause of home economics education.

The activities of the clubs seem to vary according to the particular needs and interests. Some clubs meet a demand for general social life among the home economics students and their friends, others help the home economics girls to become better acquainted with one another and with the faculty members, and these purposes has been promoted by picnics, parties, and dances.

Many clubs have raised money for scholarship funds, for equiping laboratories, practice apartments, or houses, for libraries, for local charities and school undertakings, for war orphans, for rest rooms for girl students, for health centers, for the Executive Secretary Fund and the Ellen H. Richards Memorial Fund, or for the home economics work in Constantinople College for Women. The ways of making money have

included entertainments, bazaars, food sales, serving meals or at teas, and soliciting magazine subscriptions.

Other activities have included style shows, arranging a float in a college parade, making costumes for plays and pageants and clothing for orphans' homes, helping entertain visiting boys' and girls' clubs, visiting clothing and food factories near city, publishing one issue of the college newspaper, sending news letters to alumnæ, planning a program for the girls' assembly in a high school, and entertaining all the home economics clubs of the city at tea.

Chico Normal, California, Iowa State College, and Bozeman, Montana, report having sent one or more officers of their clubs to state or regional meetings, and a few, among them those from Ypsilanti, Michigan, and from Simmons College, were represented at Buffalo.

Mattress Frauds and Laws. The National Vigilance Committee, described in an editorial in the June JOURNAL, has brought to light all but unbelievable conditions in the mattress trade. In a bulletin issued last January the committee reports:

> So-called manufacturers have comouflaged waste, shoddy, and dump refuse by means of art tickings, cretonnes, and other attractive covers. They have billed these products, polluted with filth, vermin, and disease, to dealers as supposedly new mattresses. And the dealers, in turn, have foisted these health and home menaces upon an unsuspecting public, through insidious and deceptive advertising.
>
> The fact that those engaged in the illicit traffic in unsanitary mattresses often use no label and avoid making any representation whatever with reference to materials used, renders it difficult and ofttimes impossible to deal summarily with offenders under existing advertising laws.

In February the Committee reported that, with the cooperation of the Better Business Bureaus, an offender in Indianapolis had been prosecuted, fined $20, and sentenced to jail for ninety days, while another in Spokane was fined $100. In both cases the health authorities condemned and burned the mattresses, and in both cases the dealer had been supplying them to hospitals.

'Pure mattress laws' are evidently needed; the most stringent yet passed is that in Pennsylvania. The report says of it:

> It covers mattresses, pillows, bolsters, feather-beds, comfortables, (quilts), cushions, and all articles of upholstered furniture. It prohibits the use of shoddy in any form, the use of second-hand materials which have not been

sterilized and disinfected by a process approved by the Department of Labor and Industry, and the use of materials which have been used about any person suffering from an infectious or contagious disease. It provides for a standard label, containing an official statement of the materials used in filling, along with the name and address of maker and vendor. Violation of the law is punishable by a fine of not less than $10.00 and not more than $50.00, or by a maximum of six months in jail.

'Mattress bootlegging' is said to be an evil nation-wide and the volume of traffic discovered in Pennsylvania alone is conclusive evidence of the need of laws 'with teeth in them,' and also of the necessity for educating the public to the facts behind the need. The National Vigilance Committee and the Better Business Bureaus are performing an important public service in helping prosecutions of offenders in this loathsome business. We all endorse their slogan, "Know What is Under the Ticking."

The Lore of Bread. The significance of bread among the world's foods was first brought home to many of us by the wartime wheat shortage. We had more or less accepted the truth of the adage that bread is the staff of life, we had learned in our nutrition classes that cereals are, on the whole, the most nearly complete, economical, and widely used of the staple foodstuffs, and that wheat was one of the principal items of the world's commerce. In this country even the war did not show us what it means to lack for daily bread of some kind, but those of us who tried to follow the precepts of the food conservation campaign, especially those of us who helped to teach them, had our eyes opened to the fact that bread is still literally the staff of life for millions of the world's inhabitants. We also gradually realized that among people used to one kind of bread changing to another is a hardship which strikes so far into their daily lives that it may seriously interfere with their morale; that bread which in one country is considered delicious may not be acceptable where it is unfamiliar, no matter how nutritious science may prove it to be; that if it is the custom of a country to buy bread ready baked, the housekeepers have neither the equipment nor the skill to make it a home; that only breads made from flours rich in gluten and raised with yeast are generally considered satisfactory for transport and sale; and that wheat flour ranks par excellence as the world's breadstuff. Before the war some of us might have questioned the practical value of an exhaustive study of world production, distribution, and consumption of wheat, but now we do not wonder that the Food Research Institute

has chosen this as its first great undertaking. What does surprise us is that we did not realize these things earlier, for they are writ plain in many places.

The fascinating models in the Metropolitan Museum, which show everyday Egyptian practices of five thousand years ago, include grinding grain and baking bread; loaves of bread have been found in the Egyptian tombs and the ruins of Pompeii; and the unleavened bread of the Jewish Passover still testifies to the early prevalence of yeast-raised loaves. Literature tells the same story. The trenchers which appear in every description of medieval meals were originally slices of hard bread, to be eaten along with the meat or other food which was served on them. Up to modern times fine white loaves are spoken of as a mark of wealth and luxury and contemporary novels of rural Europe show that idea still prevailing in many regions.

Proverbs in which bread plays a part are so common that a special collection has been made of them by J. H. Macadam and published in the *British Baker*. *The Hotel Monthly*, appreciating their significance and charming quaintness, has reprinted some of them for American readers in its issues for June and August 1924. The preference for wheat shows in "Do not look for better bread than wheat" or in "Millet bread is not worth talking about;" and broadmindedness in "They also bake good bread in foreign lands." The virture of thrift is extolled by the expressions "A crust for declining years," and "Sour wine and old bacon and rye bread keep a house rich;" and its lack by "Mealtime does not come punctually when there is no bread." There is a suggestion of oriental hospitality in "Bread and salt blush to be paid" and of friendliness in "The loaf of one house and the loaf of another are brother." Health campaigns might adopt "It is better to spend money for bread than for medicine," and, as a warning against dreary mealtime conversations, "Woes are not good with bread." Not a little wisdom is tucked into "Other people's bread tastes better than your own," "When a human being is born a bit of bread is ready for him," and "If fools ate no bread corn would be cheap."

Nutrition Work of the Red Cross. The appointment of a new national director of the nutrition service of the American Red Cross, the annual Red Cross convention (see page 599), and its new bulletin on nutrition (see page 594), all remind us that the Red Cross is a valiant ally in the campaign for better food habits. In its peace-time organization the nutrition service is an important activity, coordinate with such

others as the public health nursing service or the war service. Like them it has headquarters in Washington and six divisional directors, the latter forming the link with the nutrition work in local chapters.

Within the Red Cross the nutrition service is naturally most closely connected with the public health nursing service and the Junior Red Cross, and like these is actively concerned with health education. The Junior Red Cross in its work with schools emphasizes not merely health, but rather fitness for service, and thus steers away from the idea of health for health's sake—an idea which, unfortunately, sometimes tends toward a rather materialistic conception of the value of bodily fitness. Outside of the Red Cross the nutrition service stands ready to cooperate with any suitable national or local agencies. Recent articles in the JOURNAL, (May, 1924, page 246; June, 1924, page 310; July, 1924, page 373), have shown how it may work with home economists. It is a satisfaction to know that the service preaches and practices the doctrine that nutrition cannot safely be taught without special training, and that the home economics teacher is usually the member of the school staff to whom the work should be assigned.

The nutrition program of the Red Cross is not, however, confined to schools. It includes also prenatal work, pre-school work, mothers' nutrition classes, courses in food selection, and personal service, and can thus be made to reach all members of a community. A recent bulletin, "Organization of a Nutrition Service," indicates the high standards insisted on by national headquarters.

Modern Campaigning. This is neither militaristic nor political, merely educational. The Russell Sage Foundation is collecting information about methods used in intensive campaigns by welfare organizations and similar bodies, and wishes to know if and how radio broadcasting, window displays, and motion pictures have been used in such work. This raises the question whether or not home economists have experiences to report. The JOURNAL has heard vaguely of a few attempts to "put over" home economics appeals by these up-to-date means, but it is sure that many of its wide-awake and active readers are keeping up with the procession. Those who are, please tell us what they have done—, why, when, where, how, with whom, and what came of it.

OPEN FORUM

Giving Advice on Budget Planning. In the study of how best to offer advice to the public on budget planning, three points seemed to especially influence the planning of procedure. First, there is the problem of making the individual realize that he must make his own budget and showing him how to do it in such a simple way that he can easily understand. Second, the inquirer must be given the feeling that such things as conferences, records, are confidential, in order that he may be free to discuss personal affairs. Third, for the satisfaction of the consultant, there should be some means of future contact with the person to whom the advice has been given. After discussing these three points with various consultants we suggest the following procedures:

That the consultant have printed a working sheet provided with a colored carbon on which she can work out with the inquirer apportionment of expenditures, the inquirer taking the original and the consultant keeping the carbon copy. These sheets may be identified by a number rather than by the name of the inquirer. During the conference name and address may be taken down on a case card which can be numbered from the carbon copy after the consultee has left.

The arrangement of headings allowed on this working sheet is a matter on which opinions differ, and in any case details must be left to individual judgment. Some consultants prefer not to list items according to the usual percentage distribution of income, but rather as they naturally come to mind. In one column might be placed all expenditures that are fixed and that the average person can give readily, such as taxes, savings, investments, insurance payments, rent, food, newspapers and magazines, contributions, club dues, postage, telephone, light, heat, laundry, service. In another column, place those expenditure headings that are more or less flexible, as clothing, including cleaning and repair, health, household supplies, education, theater, books, gifts, vacation.

After all the fixed sums have been noted, their total may be subtracted from the total income, leaving the amount one has to apportion to the expenditure for the more flexible items. The entire income must appear in the income account, including interest on savings or investments.

Savings may be placed among the fixed expenditures or apportioned in accordance with the flexible items. Some think that deciding upon savings in the beginning may limit the amount to less than a person could really save. Others feel that it is the surest way of making provision for proper savings.

There are some things that may be well pointed out in planning the budget if adjustment in present expenditure habits is needed: that 10 per cent is usually the least that should be saved from income; that 12 to 15 per cent for clothing should be sufficient and that 20 per cent is most extravagant; and that the average American family is compelled to spend at least 20 per cent on shelter to meet its standard requirements.

There is a two-fold value to the consultant in having carbon copies of the budgets she plans. They would help in arranging tables of suggestive expenditures for the various incomes, and they afford an opportunity to review the budgets of individuals.

An account book to be placed in the hands of the consultee is indispensible and before the inquirer has left, the methods of using it should be explained. It is well to suggest that an accurate account of expenditures be kept for three or four months until one has the averages for expenditures fairly well in mind and recognizes that these averages are regular. After that, accounts, need not be kept in such detail but only for the larger items or general expenditures.

It may be necessary to give help from time to time in the establishment of account-keeping habits, and the consultant should suggest that he return, if not for help, then that she may know how the budget plan is working. If at the end of three or four months nothing has been heard from him, a follow-up letter should be sent asking how he is succeeding with his plan and inviting him to come for further help if needed.

While the foregoing does not in any way cover all of the avenues of approach to budget consultation problems, it may suggest simple methods of approach to advice on budget making.

EFALE BROWN.
American Red Cross, St. Louis.

Cutting Their Wisdom Teeth. You remember the woman who rode horseback for thirty mountain miles in order to be with mother for confinement? She died of placenta previa before morning. Another was brought by her husband in a jolting country wagon from an adjoining country, only to be buried with her unborn baby the following day. Then there was the woman who had convulsions with only tansy, peach

leaves, and the loving but ineffectual service of friends for dependence. And many times there are post partum tragedies leading to partial or complete invalidism. Is it any wonder that the country woman grows old before her time, or that she associates marriage with ill health?

Added to the trials of child bearing and its consequences under such conditions, are the constant drudgery and hard work, relieved by practically none of the modern conveniences. According to a recent study of one state, not one woman in ten has running water in her home, 91 per cent have no bathing facilities, and 85 per cent are still bending over old-fashioned wash tubs. Tradition-ridden and docile to the teaching of their fathers, steeped in the submission of their women to the establishment of the household, is it strange that there should somehow have seeped into their consciousness, from the lagles of the swamps to the rugged spurs of the mountains, an inkling of the new freedom of women?

They don't know perhaps just what they want or whither they are tending, but they are on the way. A home demonstration agent went into a remote county to organize a girls' club in home economics. They did not seem interested in cooking, sewing, canning, home decoration, poultry or any of the usual avenues of approach. Puzzled, baffled, for she was a magnetic personality quite irresistable to the average girl, she made several trips from the university into the isolated county before she could secure from one of the stolid, inarticulate group the statement, "Ef yo' wants ter know, none of us aims to git married, an' we wouldn't choose to know nothin' about homemakin'."

FRANCES SAGE BRADLEY, M.D.,
Dobbs Ferry, New York.

The Chemistry of Bread-Making. We are continually turning to the field of physical chemistry for explanations of the behavior of foods during processes of preparation. The problems of bread-making which are now being analyzed in such a way are discussed in a symposium on bread in a recent journal (1). The impetus for their study is the need for better controlled conditions in commercial bread manufacture.

Especial study of bread and flour as colloidal systems has been made by Gortner (2). The physical properties of the gluten, the determining factor of the bread-making qualities of a flour, appear to the author to be fixed upon largely at the time the proteins are laid down in the wheat berry. Strong flours are strong not because they differ in acid or salt content from weak flours, but because the gluten is capable of forming

a more tenacious gel. The question of why glutens differ in tenacity is still unsolved but his researches indicate that flour strength is dependent primarily upon the glutenin and its physical properites; the characteristics of the gliadin are very uniform in both strong and weak flours. Bread quality is of course affected by numerous factors, but whether or not a given flour will produce a satisfactory loaf seems to depend upon the tensile strength of the gluten.

Such applications of colloid chemistry are suggestive of an interesting trend in the study of food preparation problems.

REFERENCES

(1) Symposium on bread (six papers), *Jour. Ind. and Eng. Chem.*, 1923, 15: 1215.
(2) GORTNER, R. A., Physical Chemistry of Flour, *Jour. Phys. Chem.*, 1923, 27: 481, 567, 674, 771.

SYBIL WOODRUFF,
University of Kansas.

Method of Filing Textile Samples. There are drawbacks to the usual methods of filing textile samples which have been tested in the laboratory. It is difficult to keep them smooth and easy to handle in a note book. If they are pasted along one edge of the page they become wrinkled, and if they are pasted flat to the page it is impossible to feel the weight of the material or see the wrong side, two important factors in judging textiles. The principle disadvantage in keeping them on individual cards is that a filing box is necessary, which is an added encumbrance for the student who usually finds that to have all her material in one note book is more convenient both for carrying and for future reference. The following method has proved satisfactory.

The samples are mounted on sheets of thin cardboard, about 8 inches by 10½ inches, the usual size of a note book, and two samples are mounted on a sheet, one above the other. At the left of each half of the sheet blanks are provided for the description of the material; at the right is cut an opening 1⅛ by 2 inches, over which, on the back of the sheet, is pasted a sample of the material. This allows one to feel the material, see both sides, and study its weave and weight. Below the opening is a space to which may be pasted samples of the material which have been subjected to chemical or physical tests; a thin piece of isinglass pasted over these aids in their preservation. The back of the sheet may be used for noting other desired information.

SPECIMEN ARRANGEMENT OF FILING SHEET FOR TEXTILE SAMPLES—FRONT

No. 27

NAME....*Stripe crepe de chine*.....
FIBERS....*Silk*.....
ADULTERATION....*Small amount of tin*..... [Hole under which sample is pasted]
.....
WEAVE....*Body: crepe. Stripe: satin*.....
WIDTH....*40 inches*.....
PRICE....*$3.00 per yard*.....
USES....*dresses, blouses, etc.*.....

[Space for samples chemically tested]

No. 28

NAME....*Novelty silk*.....
FIBERS....*Silk, artificial silk*.....
Adulteration..... [Hole under which sample is pasted]
.....
WEAVE....*Body: twill. Lengthwise and crosswise stripe: variation of plain*.....
WIDTH....*40 inches*.....
PRICE....*$4.50 per yard*.....
USES....*skirts, dresses, hat trimming, etc*.....

[Space for samples chemically tested]

SPECIMEN ARRANGEMEMT OF FILING SHEET FOR TEXTILE SAMPLES—BACK

No. 27

[Hole over which sample is pasted]

[Sketch of fibers as seen in microscope]

RESULTS OF TESTS

I. *Sample dissolved by boiling in 5 per cent KOH for 15 minutes.*
II. *Small crisp ash left after burning, showing that fibers are true silk.*
III. *Weighting—when heated with acidified solution of $HgCL_2$ traces of tin were found to be present.*
IV. *Fibers appear as pure silk under the microscope.*

No. 28

[Hole over which sample is pasted]

[Sketch of fibers as seen in microscope]

RESULTS OF TESTS

I. *Immersing sample in 50% HNO_3, then touching with NH_4OH shows both true and artificial silk present.*
II. *Boiling in water weakens the artificial silk and destroys its sheen.*
III. *Portions weakened by cold 10% solution of KOH; others unaffected; former are artificial silk; latter true silk.*
IV. *Microscopic tests show warp of silk and filling of artificial silk.*

GERTRUDE T. DIETZ,
St. Mary of the Woods College, Indiana

WORK OF SECTIONS

RELATED ART

For several years it has been the earnest wish of many members of the related arts group that their group might become a separate and recognized section of the American Home Economics Association. At the Buffalo meeting this good thing came to pass. The question now naturally arises, what is the section going to do to justify its long-demanded existence? Surely this is a splendid opportunity and responsibility for the many strong art teachers of the country whose interest and effort center around art as it relates to the home. That home economics feels the need of art is shown by the fact that it has recognized art in the national Association and evidently hopes that the new section will provide a place where mutually interesting problems may be discussed and correlations made more vital.

The part that related art might play in the home economics program is large enough for this to become one of the strongest sections in the Association, but if this is to come about the related art teachers must make a strenuous effort. They must realize the importance of active membership in both national and local associations. Attendance at the annual meetings is important; not only is it helpful to know the celebrities who are making the outstanding contributions to the development of our subject but much is gained also from the lesser lights whose problems are like our own. Further, the annual meeting is the logical place where all the findings of the year may be presented and new trails blazed for the future—the clearing-house for what has been going on in the local groups and for planning closer cooperation and more systematic and hence more effective work. If the related art section is to grow there must be a concerted and sustained effort from all its members throughout the year to decide what questions most need studying, how they can best be studied, and how the results can be made most widely useful to the section and the Association as a whole. The related art section should also seriously strive to help promote all the activities of the Association. In such ways only can the section become a vitally functioning part of the whole—a place where we shall feel like the visitor to the related art round table who was so delighted to see that at last the art and the home economics people were getting all mixed up!

Teachers and supervisors interested primarily in clothing and foods have in the past made some of the most valuable contributions to the related art group and the new section will still need their strength and support. Directors and heads of home economics departments also can do much to help build this new section by encouraging activity in their related art teachers. One foods teacher explained her rather unexpected appearance at Buffalo by saying that a few days before her director had whispered into her ear that it wouldn't be a bad idea for her to go the meeting. Let us hope that directors will do more of this effective encouraging and whispering into the ears of related art teachers before the next annual meeting!

VIRGINIA M. ALEXANDER,
Chairman.

BOOKS AND LITERATURE

The Story of Canned Foods. By JAMES H. COLLINS. New York: E. P. Dutton & Co., 1924, pp. 251. $3.50.

To a Frenchman, Appert, is due the credit of being the founder of the canning industry. In 1809 he received the prize of twelve thousand francs offered by the French government for a method of preserving fruits and vegetables, and the following year he published a book describing his methods in detail. He used glass bottles with cork stoppers wired in, enclosed each bottle in a canvas bag with drawstrings at both ends, and heated them in a water bath. His descendants in Paris still conduct the business which he founded. It was an Englishman, Durand, who first used the tin can, or tin canister as he termed it, as a container in which to seal food. Upon the basis of the work of these men, the canning industry has reached its greatest development in the United States, having been greatly stimulated as the result of the extensive use of canned foods during the Civil War.

In "The Story of Canned Foods", the author, James H. Collins, has brought together a large amount of material, the most valuable part of which is that relating to the history of the industry in this country. Such historical material is widely scattered and not accessible to the average student. His descriptions cover the entire field,—vegetables, fruits, milk, meat, marine products, and 'made dishes'. These are followed by short chapters on the wholesomeness of canned goods, marketing, and home canning. As an enthusiast, he describes commercial canning at its best. If all manufacturers maintained these high standards, the product would undoubtedly be superior to most of the canned food prepared at home but, unfortunately, this is not always the case.

The rise of the canning industry in the United States has been so spectacular, it is unfortunate that the author found it necessary repeatedly to call attention to this by means of comparisons unfavorable to other countries. He has used the ultra-popular style of the American daily newspaper, including exaggerations and loose statements intended to compel attention. While this method may be understood in this country, it is not to be commended. On page 24 there is an evident error, the items totalling 45.5% instead of 10% as the author indicates that they should. On pages 52–53 are described two machines for peeling tomatoes whereas on page 114 occurs the following statement: "Tomatoes are peeled by hand, no machine having yet been invented for the purpose." On the next page the statement is repeated in different words. In this chapter (VIII) there is considerable repetition of material previously given. In fact, there is general lack of correlation and frequent repetition throughout the book.

The book is well printed and illustrated by 59 plates.

LOUISE MCDANELL BROWNE.
Washington, D. C.

The Open Air Nursery School. By E. STEVENSON, New York: E. P. Dutton & Co., 1924, pp. 87. $1.00.

Nursery schools, although better known in England than in the United States, are an innovation even there. This little book has therefore a real timeliness, since its chief purpose is to introduce the lay reader to such schools. Though it discusses the general characteristics of the English nursery schools, it uses as the chief source of its illustrations the Rachel McMillan Nursery School of London.

About half of the book is devoted to a somewhat anecdotal description of the type of parents, children, and homes with which

the nursery school deals, and a statement of the great need for work such as is carried on in these schools.

The second half of the book tells of the beginning of the Rachel McMillan Nursery School and traces its development along with that of other similar schools. It includes also a consideration of the probable future of such schools.

The emphasis throughout appears to be on the need for nursery schools in the tenement or slum districts, and one cannot but wonder if the author believes that the schools are needed most in these less fortunate places or if she would concur in what seems the prevailing point of view in the United States, that child training such as they offer is equally needed in the more fortunate localities.

Even the casual reader is likely to be interested in the nursery school described, and to this extent the volume has met its purpose. For the person especially interested in the nursery school problem the brief, rather sketchy description of the way the schools are run will suggest further questions to which the book gives no answer.

Too much, however, is not to be asked of a short popular discussion, and we are grateful for a book which anyone interested in children, or schools, or both will enjoy reading and which leaves one much wiser as to what nursery schools are trying to accomplish.

MILDRED WEIGLEY WOOD,
Phoenix, Arizona.

Household Physics. By WALTER G. WHITMAN. Vol. 1. The Wiley Technical Series for Vocational and Industrial Schools. New York: John Wiley & Sons, 1924, pp. 437. $1.90.

Household varieties of physics or chemistry or any of the sciences are always open to question. The scientist often scorns them because he thinks that physics is physics, and chemistry is chemistry, even in the home. It is extremely difficult in any of the so-called applied sciences to write a text that is sound scientifically, and yet is simple enough to be suitable for girls of high school age in vocational schools.

The author of this volume has succeeded in presenting the subject in such a way that it will be intelligible to his audience, but he has done it at the expense of the subject matter of physics. Instead of teaching the fundamental laws, and using illustrations from the household, the book deals mostly with the applications. In an attempt to make it interesting and understandable, much of the real substance is lost.

Even so, there is a great deal of material in the book which would be of value to a homemaker, as for example, in the chapters on house heating, electrical currents, electrical devices in the home, machines in the home, and household measurements. Certainly girls in industrial schools could make excellent use of information on these subjects when they get into their own homes, and perhaps, since this is so, it is relatively unimportant whether or not it can with accuracy be called a book of physics.

CHARLOTTE CHATFIELD,
U. S. Department of Agriculture.

Applied Chemistry. By IRA D. GARARD. New York: The Macmillan Company, 1924, pp. 496. $3.25.

As a result of the recent effort to popularize science, books in the field of applied chemistry written for the layman with no previous knowledge of the subject are rather common. Much rarer are those like the "Applied Chemistry" by Professor Garard of the New Jersey College for Women, whose purpose is to combine a text for college students having a year's training in chemistry and a book useful to people interested in related science, art, and industry.

To cover in a limited space such varied topics as water, colloids, food and nutrition, textiles, leather, ceramics, metallurgy, is a difficult task. The difficulty is increased by the attempt to give a systematic treatment of the practical information of chemistry which will at the same time be interesting to somewhat advanced students and intelligible to those whose chemical training may have been brief and remote. This task Professor Garard has accomplished with moderate success. He has produced a readable book containing much valuable

information from widely scattered sources, frequently presented in excellent tabular form. The book, however, is uneven in quality. Fully twenty per cent of the material included is such as may be properly and satisfactorily treated in a text in general chemistry. Complicated structures of relatively unimportant organic compounds occupy space better devoted, for example, to a discussion of optical activity which would elucidate a laboratory exercise on the polariscope. Interesting, recent applications in the field of colloids, for instance, are not mentioned. Minor errors need correction.

The instructor, who has sought in vain for a chemistry text for second year home economics students, must, to our mind, continue her quest. Inadequate discussions of important topics, needed as preparation for work in nutrition, are insufficiently supplemented by laboratory exercises, such an important experiment as the Kjeldahl method for nitrogen being omitted. On the other hand, teachers of both chemistry and home economics, especially those teaching in high schools where library facilities are limited, will find in Professor Garard's book abundant reference material for themselves and for their students and will welcome it to their shelves.

QUAESITA C. DRAKE,
Women's College, University of Delaware.

BOOKS RECEIVED

The Older Universities of England. By ALBERT MANSBRIDGE. Boston and New York: Houghton Mifflin Company, 1923, pp. 308. $2.50.

An interesting account of the history, achievements, mode of life, and ideals of the Universities of Oxford and Cambridge, based on a course of lectures delivered on the Lowell Foundation, Boston, 1922; intended especially for American readers; includes, scattered through the volume, considerable information on food and general living conditions, and a few interesting figures for student expenditures, for example, during the fourteenth century.

Food Models for use in Home Economics Classes. Designed by LYDIA J. ROBERTS, Chicago: 1924, individual copies $0.75; in lots of 25 or more $0.65 each.

A tablet of eleven pages, of black outline drawings of food portions, life-size, with a page of instructions as to their use; intended to replace the author's earlier food stencils; the foods to be colored, cut out, and used in situations where it is impractical to have real foods. On sale at the University of Chicago Bookstore, 5802 Ellis Avenue, Chicago, Illinois, where wooden blocks with slits to support the models may also be purchased at $0.50 for 40 blocks.

Colonial Dames and Good Wives. By ALICE MORSE EARLE. New York: The Macmillan Company, 1924, pp. 315. $1.50.

A new edition of a readable book by a well-known writer on colonial life; quotes freely from memoirs and letters of the period; gives realistic picture of the status and activities of women and of many colonial customs; includes, in a chapter entitled "Fireside Industries," brief descriptions of old-fashioned cooking utensils and household conveniences.

Directory of Social Agencies of New York. Published by the Charity Organization Society, 1924, pp. 434 $2.00.

The thirty-third edition of a standard handbook formerly known as the New York Charities Directory; gives name, address, purpose, and in many cases officials of agencies concerned with the betterment of human conditions; includes not only local organizations but also state, national, and international ones having New York offices; well provided with indices and cross-references; likely to be useful not only to social workers but to institution managers, supply houses, nutritionists, and organizers of health campaigns or other educational and welfare movements.

The Federal Board for Vocational Education. Its History, Activities, and Organization. By W. STULL HOLT. Institute for Government Research Service Monographs No. 6. New York: D. Appleton & Company, 1922, pp. 74. $1.00.

The Women's Bureau. Its History, Activities, and Organization. By GUSTAVUS A. WEBER. Institute for Government Research Service Monograph No. 22. Baltimore: Johns Hopkins Press, 1923, pp. 31. $1.00.

Two volumes of an uncompleted series of studies of government organizations; based principally on official statements and reports and intended to provide impartial information for those interested in efficient legislation, administration, and popular control; give brief statements of the development and organization of each organization, including salary rates, lists of publications, text of laws affecting the organizations, annual appropriations and expenditures, and bibliography of literature dealing with the organization.

Food: Why? What? How? Washington, D. C.: American Red Cross, 1924, pp. 38.

Pamphlet prepared by Anna R. Van Meter for the nutrition service; a simple statement of the main facts of nutrition and food selection intended primarily for Red Cross nutrition classes, but adapted to the use of any person seriously interested in practical dietetics; includes tables showing the value of common food materials and typical meals as sources of protein, calcium, phosphorus, iron, vitamins, and energy, and height-weight tables for children and adults.

A Nutrition Primer for Boys, Girls, and their Young Friends. By HELEN PRESCOTT LANSING. Plattsburg, New York: The Imperial Press, 1924 pp. 71.

A pamphlet intended for use in the Clinton County health campaign, contains simple statements of the elementary facts and precepts of hygiene and nutrition, reproductions of posters and charts used by other organizations interested in child health, and also specimens of blanks on which the children may keep their own records of growth, food eaten, exercise taken, and health habits practiced.

The Family Life and the Teaching of Home Economics. Vocational Education Association of the Middle West, Monographs on Vocational Education, 1924 Series, No. 1, Peoria, Illinois: The Manual Art Press, 1924, pp. 34. $0.25.

A collection of addresses presented at the tenth annual meeting of the Vocational Education Association of the Middle West at St. Louis, January 1924, by Marcia E. Turner, Florence Sample Fleming, Nona E. Goodwin, Mabel Lawrence Evans, with an introduction by Adah H. Hess. Purchasable from the secretary of the association, L. W. Wahlstrom, 1711 Estes Avenue, Chicago, Illinois.

Home Play. By W. C. BATCHELOR. New York: Playground and Recreation Association of America, 315—4th Avenue. 1924, pp. 32. $0.10.

A booklet by the superintendent of public recreation, Fort Worth, Texas, first published and distributed by the Public Recreation Board of that city and by their courtesy now re-issued in more widely available form; gives clear, brief directions for arranging and using backyard playground equipment, suggestions for home play for the whole family (including 'Mother's Holiday' as a chance for playing house in reality), and constructive play in the home for both boys and girls; also lists under children's reading the titles of John Martin's "Safety Sixty" with his estimates of the special influence of each book upon the child.

Elements of Electrical Engineering. By GEORGE D. SHEPARDSON. New York: The Macmillan Company, 1924, pp. 335. $4.00.

An introductory textbook for technical schools and colleges; places emphasis on practical phases rather than on mathematical developments, and frequently uses household equipment and processes to illustrate principles discussed.

Workers Education Year Book 1924. New York: Workers Education Bureau of America, 476 West 24th Street, 1924, pp. 199. $1.00.

A handbook of the worker's education movement in the United States; contains, in the first part, essays on the general aims of the movement by the late Arthur Gleason and Spencer Miller, Jr., the secretary of the Bureau; in the second part, the full report of the third national convention of the Worker's Education Bureau in the United States, held at the New School for Social Research, New York, in April, 1924; and in the third, a directory of workers' educational enterprises in the United States and a bibliography on adult workers' education; deals with general needs and methods of education for industrial workers and with the development of the labor movement rather than with other specific subjects of study, but includes a list of problems suggested by the executive committee for discussion at the 1925 convention, among them health education.

The Enjoyment and Use of Color. By WALTER SARGENT. New York: Charles Scribner's Sons, 1923, pp. 274. $2.50. Held for later notice.

NOTES AND CLIPPINGS

Selection and Conservation of Textiles. Under this title the Laundry Owners' National Association, through its department of research at the Mellon Institute of Industrial Research at Pittsburgh, Pennsylvania, has issued a series of twenty-six carefully prepared leaflets intended for popular educational use. They show how the durability of textiles which are to be laundered is affected by such factors as weave, quality of thread, character of finish, defects in material, careless wear and handling, weathering, and the use of hard and soft waters. One leaflet gives the results of a wearing test with sheets and shows the breaking points of warp and filling threads when the sheet was new, after fifty, and after three hundred and three washings. The association plans to have the leaflets distributed by member companies among laundry patrons as part of a campaign to arouse public interest in pure textiles.

Pictures on the Cash Account. The Providence Society for Organized Charity has a novel form of account slips for its work with dependent families. On one side of the 11 x 9½ inch sheet are the blanks for name and address and the columns for money spent for five groups of foods, each headed by an attractive little sketch suggesting the kind of foods in the group. In a column at the left of the page are six sketches representing the six work days of the week according to their usual tasks—Monday, washing, Tuesday, ironing, and so on. At the bottom of the page there are six simple rules for food selection. On the other side of the sheet are well-arranged blanks for weekly receipts and simply classified expenditures. The advantage of the pictures in dealing with women unused to reading or to English is obvious.

How to Use Apples. The Agricultural Department of the Union Pacific System, Omaha, Nebraska, has issued a booklet, "150 Recipes for Apple Dishes," which includes a list of apple varieties with the season and the cooking and eating quality of each.

Pasteur and the Silk Industry. An account of Louis Pasteur's work to check the ravages of a silkworm disease known as *gattine*, and the consequent development of modern scientific methods of sericulture is given in the July issue of *The Silkworm*, the monthly magazine of the Silk Association of America.

Journal of Oil and Fat Industries. The first number of this new scientific publication was issued in July by the American Oil Chemists Society. The periodical will be devoted to the chemistry and chemical engineering of all phases of the

manufacture and uses of animal and vegetable fats and oils. Subscriptions may be addressed either to Herbert S. Bailey, editor, Box 756, Savannah, Georgia, or T. B. Caldwell, secretary of the society, Law and Company, Wilmington, N. C.

American Engineering Standards Committee. The 1924 Year Book shows that one hundred and fifty-two projects are completed or under way in which two hundred and thirty-five national organizations are coöperating, including one hundred and forty national trade associations. So much has the movement progressed that the committee now has representatives in Pittsburgh, Boston, Chicago, and Seattle. Among projects of interest to home economists are various safety codes which have to do with construction of dwellings and other buildings, and methods of testing textile materials. Copies of the Year Book may be obtained on request to the committee at 29 West 39th Street, New York City.

Athletics for women. The resolutions adopted in April, 1923 by the newly-formed women's division of the National Amateur Athletic Federation, Mrs. Herbert Hoover, chairman, are published by the U. S. Bureau of Education in Physical Education Series, 1924, No. 4, along with brief introductory remarks by Dr. J. F. Rogers of the Division of School Hygiene and Physical Education. The address of the women's division is Room 1712, 110 East 42d Street, New York City.

ABSTRACTS FROM PERIODICALS

NUTRITION

Butcher, R. A. and Francis, E. Vitamin Studies. X. Feeding Technique in Vitamin Studies. *Proc. Soc. Exper. Biol. and Med.* 1924, 21: 189

Feces-eating by laboratory rats may furnish the necessary margin of vitamin B to interfere with the results of feeding tests. This was demonstrated by a comparison of rats housed in ordinary cages and those kept in cages with false bottoms made of coarse screening which permitted feces to fall below, out of reach of the rat. The results indicate a cycle of storage, utilization, excretion, and re-ingestion of vitamin B which can be continued for some time before the rat shows the effects of a low vitamin B diet. The fact that rats living in false-bottomed cages almost immediately lose appetite and weight after they are placed on the deficient diet points to their inability to store the vitamin for any considerable period.

SYBIL WOODRUFF.

Goldman, A. Studies in Intestinal Bacteriology. I. *Jour. Inf. Dis.* 1924, 34: 459.

The object of the experiments was to ascertain variations of bacterial flora, both aerobic and anaerobic, at certain levels of the small intestine in both health and disease. The history of work on flora of the small intestines is reviewed and theories of its possible relation to disease are stated. In the experiments here first reported a duodenal tube was sterilized, the metal olive covered with a gelatin capsule, sprayed with parvaseline, and thinly coated with wax. The tube was swallowed before breakfast, and two or three hours later, air forced through the tube to perforate the wax. The sample was aspirated into a sterile test tube by an ordinary suction syringe. The subject was then sent to the Roentgen ray room to ascertain the exact position of the olive. Part of the material was incubated in various media and part heated 15 to 20 minutes at 80° C. before dilution to test for spores.

The subjects were four normals and twenty patients in Bellevue Hospital, some on restricted diets. The samples were taken from the jejunum and showed a wide range in both number and kind of bacteria in both normal and abnormal subjects. In normals, the count ranged from less than 100 to over 100,000. The abnormal subjects were grouped according to the bacterial count, and

diseases frequently traced to intestinal foci of infection were shown to give a bacterial count of over 100,000 per c.c.

The mixed bacterial character of most specimens, both normal and pathological, is emphasized. The colon group was found to be a regular inhabitant of the jejunal region. Anaerobes were isolated from some hospital cases, but none from normals; spore-bearing aerobes accompanied by proteolytic activity were less commmon in hospital than in normal specimens.

HANNAH A. STILLMAN.

Goldman, A. Studies in Intestinal Bacteriology. II. Effect of Special Feeding on Intestinal Flora. *Jour. Infect. Dis.*, 1924, 34: 502.

A patient who took the tube especially well was selected for further experiment and doses of B. acidophilus culture and of lactose where given in alternating periods to see whether either would increase the B. acidophili in the small intestine. The B. acidophili introduced were eliminated rapidly and did not increase the number in the small intestine. Lactose feeding led to some increase in the number of B. acidophili but to more increase in the streptococci. Later a sterile diet was given with the B. acidophilus culture, but the B. acidophili did not establish themselves even temporarily.

HANNAH A. STILLMAN.

Baehr, G., Lande, H., and Graves, Lulu G. A Simple Method of Prescribing Diabetic Diets. *Jour. Am. Med. Ass.* 1924, 82: 1509.

A table of diabetic diets is presented in a simple form in order to assist the general practitioner to prescribe accurate diets without the necessity of using complicated mathematical formulas. The table of Joslin has been modified to accord with more modern principles, preserving a proper antiketogenic balance, containing a constant minimum amount of protein and a moderately large amount of fat. Twelve test diets are given in the table with various amounts of carbohydrate, constant amounts of protein, and slightly varying amounts of fat. Typical foods that may be used to satisfy these requirements and the weight of each allowed are grouped under the headings carbohydrate (vegetable, 1–3%, 3–5%, 10%, 15%, oranges, apples, bread, Uneeda biscuit, potatoes, and oatmeal), and protein and fat (eggs, meat or fish, cheese, cream, butter, and olive oil). Several typical daily menus show proper distribution of these foods. Corrections necessary for various body weights are given, also modifications of the test diets to form maintenance diets (an increase of the protein by one-half and of the fat by one-fourth). The general principles involved in the diets and also in the use of 'starvation diets' are clearly stated.

On application to the authors at Mt. Sinai Hospital, New York City, reprints may be procured; these include also supplementary lists of foods which may be substituted in the diets.

BERTHA K. WHIPPLE.

Marriott, W. Mc. and Davidson, L. T. Acidified Whole Milk as a Routine Infant Food. *Jour. Amer. Med. Assn.* 1923, 81: 2007.

The general belief that buttermilk is better tolerated by infants than sweet cow's milk has encouraged a wide use of soured milk in cases of intestinal disturbances. The authors believe that acid cow's milk does not neutralize the gastric juice and in this respect behaves more as breast milk; they have applied their principle with success to routine feeding of all infants.

The writers recommend a soured milk which is more quickly prepared than by bacterial culturing. One pint of milk is boiled five minutes and cooled; and 4 cc. of lactic acid (U. S. P.) is added slowly from a medicine dropper while the milk is gently stirred. The resulting product is very similar to a good quality of buttermilk. For additional energy, corn syrup is added to this undiluted acid milk. For the usual infant "about as much as he desires every four hours" is given of a mixture of one pint of the milk and one ounce of corn syrup.

This type of formula has been used with about 1000 babies in St. Louis with satisfaction. Careful analysis of the records of 142 infants of whom many were underweight

shows that the average daily gain in weight was 0.9 ounce; diarrhea and vomiting were rare. The average number of calories fed daily was 70 per pound. Furthermore in this hospital the mortality of athreptic infants who were given this formula, has fallen from 78 per cent in 1919 to 26 per cent during the past year.

MARGUERITE G. MALLON.

Paine, H. S. Constructive Chemistry in Relation to Confectionery Manufacture. *Jour. Ind. and Eng. Chem.* 1924, 16: 513.

The purpose of this article is to emphasize the need for the application of chemistry and physics to the successful commercial manufacture of confectionery. As an example the making of fondant types of candy is considered. The usual (commercial) method is to use sucrose and commercial glucose in variable proportions, and to form the desired product by proper boiling, cooling, and creaming. This is not really a solid, but consists of a liquid and a solid phase, a mother sirup and minute sugar crystals, 'medium' and a 'suspension.' Differences in temperature during the ripening, making up, and keeping of the fondant candies cause changes in the phases, hence in the plasticity and mobility of the fondant and in the resulting consistency. Different types of candy require different consistencies, and it is desirable that the proper consistency should be held as long as possible after the candy has been made and that the fondant should not 'dry out.'

This change in consistency, resulting often in the forming of larger sugar crystals, suggested the use of an inverting agent. The acids commonly used (citric, tartaric, and cream of tartar) are effective only at high boiling temperatures and also influence the flavor. Yeast was suggested, but its use was impracticable owing to difficulty of control, variability of yeast, and effect on flavor and color. The use of invertase was found very successful. It may be added either when the sirup is creamed or when the fondant is remelted. Varying amounts are used according to the result desired,—very firm fondants for the covering of bonbons and for thin-coated chocolates, more creamy fondant for 'flowing' centers, and complete liquefaction for cordialized fruit centers. The proportion of invertase is further adjusted to the probable time elapsing between manufacture and consumption. Invertase may be used successfully in such types of candy as fudge, marshmallows, and caramels, the proper consistency of which depends largely on the presence of sucrose. The use of invertase also shortens the manufacturing process and lessens waste. A standard preparation has been placed on the market and is being used by some of the largest manufacturers.

BERTHA K. WHIPPLE.

Poste, E. P. Heat Transfer in Enamel-Lined Apparatus. *Jour. Ind. and Eng. Chem.* 1924, 16: 469.

Observations have been made on the over-all coefficient of heat transfer in commercial enameled steel and enameled cast-iron containers. The sources of heat used were steam, hot water, and hot oil at varying temperatures. Water, milk, cream, shredded pineapple, tomato pulp, and oil were heated to different temperatures. Water, milk, and cream were also cooled by circulating water and by brine. The effect of agitation at varying rates was considered.

The cast-iron units gave a lower over-all coefficient of transfer than did the steel. This was found to be due to the thickness of the enamel coating rather than to the thickness of the metal. It was found that the heat transfer from steam to boiling water was 700 kilogram calories per square meter per hour per degree centigrade, and from steam to a less mobile liquid (shredded pineapple) it was 160.

The effect of agitation was comparatively slight on water but on a thick liquid (tomato pulp) the over-all coefficient was increased from 450 with no agitation to 770.

BERTHA K. WHIPPLE.

NEWS FROM THE FIELD

American Child Health Association. At the second annual meeting, to be held at Hotel Baltimore, Kansas City, Missouri, October 14 to 16, the program will consider the training of leaders for child health work in urban and rural communities, the problems of late childhood and early adolescence, and the phases and method of procedure for community organization for child health work. Among the speakers are listed Secretary Hoover, Dr. George E. Vincent, Dr. Caroline Hedger, Dr. Florence Brown Sherbon, and Dr. Louise Stanley.

American Hospital Association. The 26th annual conference will be held at Buffalo, October, 6–10. Among the special programs is one arranged by the dietetic section, of which the chairman is Miss Lulu G. Graves, Mount Sinai Hospital, New York, and the secretary, Miss Marion Peterson, Miami Valley Hospital, Dayton, Ohio. The problems of the small hospital will receive special attention throughout the conference. Among the foreign visitors expected is a large delegation from New Zealand.

American Public Health Association. The annual meeting is to be held at the Hotel Statler, Detroit, October 20 to 23. At the first general session Dr. Thomas Madsen, chairman of the health section of the League of Nations, is expected to address the association.

American Red Cross. The fourth national convention, to be held in Washington, October 6–9, will include formal meetings with many prominent speakers, brief reports from local chapters, and round table conferences for informal discussion of special lines of work. The conference of the nutrition service is set for the afternoon of Tuesday, October 7. Among the speakers expected are Mary E. Sweeny, Lita Bane, and Helen Stacey.

Clyde B. Schuman has been appointed to succeed Margaret Sawyer as national director of the nutrition service. Miss Schuman was for a time instructor in the foods and cookery department at Teachers College, Columbia University. She has been connected with the Red Cross nutrition service for several years, both as divisional director and as assistant national director.

American Hotel Association. At a meeting held in Cleveland, July 14–15, this association was reorganized under the official name of the American Hotel Association of the United States and Canada, with state or provincial associations as voting members and an executive council which includes a representative from each of five groups of states. The educational work begun by a committee of the old association under the chairmanship of Mr. Howie is to be continued, and the course in hotel management at Cornell University was heartily endorsed. The president of the association is Frank A. Dudley and the executive secretary, who is to have headquarters at the Willard Hotel, Washington, D. C., is John F. Shea, formerly of the Hotel Regent, San Francisco.

American Chemical Society Prize Essay Contests. Secretary Hoover, chairman of the national awards committee of the society, has announced the names of the six high school students who won the contest for university scholarships offered by Mr. and Mrs. Frances P. Garvin in memory of their daughter (see this JOURNAL, March, 1924, page 156).

The contest will be repeated next year under similar conditions. In addition, six prizes of $1,000 each will be offered to students of colleges and universities for the six best essays on designated subjects: The Relation of Chemistry to Health and

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ALABAMA

Auburn Home Economics Club. A summer school branch was for med and met on the porch of Smith Hall for an hour just after supper every Monday evening during the session. At the initial gathering, June 16, Elizabeth Young, president of the local club, welcomed the newcomers, Annie Broughton told of experiences at the New Orleans meeting, and Dean Agnes Ellen Harris outlined the growth of home economics from the first Lake Placid Conference to the present. There were about thirty-five students and several visitors present.

At the second meeting Prof. Edmund Shaw of the Harvard Graduate School spoke to the club on the relationship of tests and measurements to home economics. Mrs. T. E. Benner, who is compiling a recipe book for extension service, was also a guest.

An informal social gathering was held at the practice house on June 30.

ALASKA

Alaska Agricultural College and School of Mines. Ruth K. Traill, formerly assistant professor of home economics at West Virginia University, has gone to Fairbanks as professor of home economics. This college, which was opened last spring, has a present enrollment of sixty students.

CALIFORNIA

California Home Economics Association. The Southern Section met on May 17th in Los Angeles to be instructed by an authority, Mr. Maxwell of Parmalee Dohrman Co., on china ware. The talk was made fascinating by the wonderful plates and other pieces brought to illustrate his talk on the rise of American pottery, culminating in that finest of all, the products of the Lenox factory. The Section at this meeting voted to send Mrs. Ida Sunderlin, the president, to Buffalo with expenses paid. Mildred Eby was elected alternate.

On June 7th the same section met at the University of California, Los Angeles, as guests of Dr. Helen Thompson and her faculty. This was also the annual homecoming day of the department. After the regular board meeting Mrs. Pettis of the Wadesworth development school gave a description of the remarkable results accomplished through weaving by the subnormals in her classes, many beautiful scarfs, runners, and rugs giving ample testimony to all she said.

Dr. Allen of the university research laboratories told of his work in removing and transplanting the pituitary and thyroid glands in tadpoles and added to our knowledge of the value of the endocrine glands in proper growth, health, and development.

GEORGIA

Home Economics in Women's Clubs. The Georgia Federation of Women's Clubs is much interested in home economics and coöperates with all agencies to further the teaching of this subject. A scholarship fund in memory of Celeste Parrish, a noted educator, is used only for home economics training at the State College of Agriculture. An additional fund of one thousand dollars is being raised for a like purpose in each of the twelve congressional districts.

Susan Mathews, nutrition specialist, gave a series of lectures at the club institute for women at Mercer Institute.

State Agricultural College. Introduced by Mrs. Ira E. Farmer, chairman home demonstration work, G. F. W. C., and under the direction of Lois Dowdle, state girls' club leader, twelve club girls in uniform presented a playlet before the annual

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convention of the Georgia Bankers' Association which resulted in the establishment of a loan fund of five hundred dollars, to be increased annually by a like sum and to be used for club girls taking home economics at the College.

Thomson High School. The home economics class serves three hot dishes in winter and three cold ones in the warm months. All material is bought and the food is prepared and served by the class as part of their training, and there are contests among the groups as to which furnishes the most nourishing food at lowest price. Such foods as vegetable soup with bread, Irish stew, apple roll, hot chocolate, and ice cream are sold at five cents a serving, and the profits have paid for a sewing machine and other equipment.

ILLINOIS

Illinois State Normal University. The fourth annual homecoming will be held on October 24–25, 1924. The principal features of the celebration will be: Friday, 8:00 p.m., The Jester Play; Saturday, 8:00 a.m., Waffle Breakfast, "Hobo" Parade; Saturday, 2:30 p.m., Football, DeKalb vs. Normal University; Saturday, 8:00 p.m., Homecoming Party. The chairman of the committee on arrangements is Annette B. Cooper, Normal, Illinois.

IOWA

Iowa State College. Regina J. Friant, director of graduate research in home economics vocational education, is offering a new course in the technique of vocational home economics supervision. The practical side of the work includes opportunity for students to observe conferences, plan and supervise units of work, and to call small group conferences of teachers.

A new home management house this fall will bring the number of such houses up to three. It will be in charge of Lydia E. Swanson, a graduate of Nebraska University who has studied child care at Merrill-Palmer.

During the second summer session the Beach Home Management House was in charge of A. Grace Johnson, head of home administration and child care at Oregon Agricultural College; and in the Knapp Home Management House was Fay Fenton, in charge of the practice cottage at Cornell University.

The teaching staff in household administration has been increased this fall by three new members. Doctor Hazel Kirk, formerly an instructor in economics at Iowa State College, later at Wellesley and at Oberlin College, and more recently at the Food Research Institute at Leland Stanford is to be professor of economics and household administration. Mary A. Mason and Lydia B. Swanson come as instructors.

Florence M. Gunther, a graduate of the University of Chicago and Pratt Institute, comes from the Sterratt School for Girls, Chicago, to be instructor in applied art.

Mary Hall, Oregon Agricultural College, '21, who has recently been teaching in Alberta, Canada, has received the teaching fellowship in the foods and nutrition department. Ruth Pohlman, who held the fellowship last year and received her masters degree in July, is now on the permanent teaching staff.

Announcement was made at the graduating exercises in June of a gift to the Division of Home Economics of a loan fund of $1000 from Mr. Parley Sheldon, the "grand old man" of Ames, in memory of his wife. The fund will be available March 1, 1925.

Home Economics Vocational Homemaking Conference. This was held at Iowa State College, July 14–18, and called together about seventy-five high school teachers of home economics to consider methods of introducing some of the more recent developments in home economics subject matter. Under the guidance of Dr. Florence Brown Sherbon, director of the Kansas Bureau of Child Research and Dr. J. E. Evans, professor of psychology at Iowa State College, the work of the conference centered on the subject of child care. Professor W. H. Lancelot, professor of vocational education at Iowa

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State College, led a daily discussion period on the basis of good teaching. Problems in related science and in related art were handled respectively by Dr. R. E. Buchanan, dean of the graduate school and Mrs. Irma Camp Graff, instructor in applied art. Prof. Florence E. Busse spoke on the nutrition program in the public schools. Regina J. Friant, director of graduate research in home economics vocational education, conducted a discussion period on home projects. Winifred Tilden, professor of physical education told of the courses offered in her department for the training of Camp Fire guardians.

LOUISIANA

Louisiana Home Economics Association. The annual meeting will be held in Shreveport on November 20 and 21 in conjunction with the Louisiana Teachers Association. Committees on clothing, household management, foods and health, and child care will give reports of their accomplishments for the past year. The program, which will include several well-known speakers from out of the state, will be devoted to home economics education, problems of the homemaker, club work and the community, and health programs for the public schools.

Louisiana State University. 'A Free Trip to Healthland,' an exhibit arranged by the seniors of the home economics department at the state fair last fall, was repeated this summer for the boys and girls attending the short course. 'Healthland,' laid out on a large platform covered with green burlap, had an electric train to convey its tourists to all junctions, towns, and villages. At each station guides directed passengers to points of interest and explained the correct foods to eat and the right things to do in order to be a healthy boy or girl. This schedule for a perfect day, from seven o'clock in the morning, when the "Red-Cheek Local' pulled out of the station, till the 'Shooting Star Limited' glided into 'Long Sleep Mountain' at evening, proved a fascinating lesson for the children; also a demonstration from which grown-ups might profit.

The eleventh annual short course for boys and girls, conducted by the extension division in coöperation with the U. S. Department of Agriculture, was held July 28–August 2, with an attendance of eight hundred boys and girls. The short course was declared by all to be the most successful ever held in this state.

One feature of especial interest was the health record made by the young people during their week on the campus. Special lectures on food selection were given on the first two days. The sale of such things as soft drinks, and candy was not permitted on the campus. Special thought was devoted to the kind and quality of food in the cafeteria. No serious case of illness developed during the entire week, and not a single case of stomach disorder was reported at the hospital. Games, contests, lectures on such topics as 4-H ideals, social standards, and home and community, as well as special work in breadmaking, poultry production, and other club activities, made the week an unusually interesting one.

Normal College, Natchitoches. Margaret Weeks, director of home economics and president of Louisiana Home Economics Association, will spend next year at Columbia University. Jane V. Rice will be acting director of home economics during her absence.

Louisiana Polytechnic Institute. Corabel Weimer, who has been on the home economics faculty for the past year, will be in the home economics department at Montevallo, Alabama, next year.

MASSACHUSETTS

Massachusetts Dietetic Association. The annual meeting was held May 23, 1924, at the Women's City Club, Boston, Massachusetts. The following officers were elected: President, Amalia Lautz, Peter Bent Brigham Hospital; vice-president, Quindara Oliver, Children's Hospital; secretary, Ellen Riley, R. H. Stearns Employees Cafeteria; treasurer, Margaret McGovern, Boston City Hospital.

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MISSISSIPPI

Mississippi State College for Women. Mrs. Miller and Miss Searcy of the University of Missouri are taking the places of Falba Foote and Irma Cooper; Julia Scott who has been away on leave will return; and Frances Henley and Loyette Webb, both of Peabody and Chicago University, will be on the home economics faculty.

College Home Economics Clubs. The Home Economics Club of M. S. C. W. has been represented on the program of the annual meeting of the Mississippi Home Economics Association for two years and expects to pay its affiliation dues to the American Association in the fall.

Belhaven College of Jackson was represented on the program in May and has promised to affiliate with the American Association.

Trade Extension in Home Economics. The State Vocational Board has just completed a month of trade extension work in home economics with the girls and women employed in the Edwards Hotel, Jackson, under the direction of Frances Henley. The hotel management, the supervisor of trade and industry, and the supervisor of home economics were all pleased with the results.

Home Economics Legislation. At the last session of the Legislature a bill was passed allowing the state to give aid to all rural, consolidated, accredited schools giving courses in vocational home economics and agriculture. Most of these schools already have work in agriculture and this new act will be especially helpful to home economics and increase the number of vocational home economics departments.

MISSOURI

University of Missouri. Dr. Helen S. Bridge of the University of California has been appointed chairman of the department of home economics to succeed Dr. Louise Stanley who is now chief of the new Bureau of Home Economics in the U. S. Department of Agriculture.

Rowena Schmidt, who has been in charge of the home management work, has resigned to become assistant to Dr. Stanley. Harriet Palmer of the University of Colorado will succeed her.

Nina Reilly, formerly of the home economics staff, has returned as instructor of clothing.

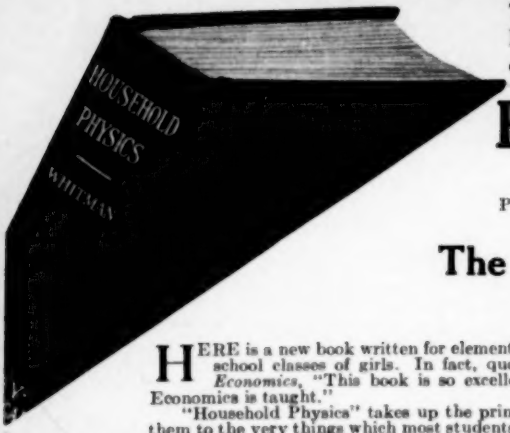
Three years ago one half of the home economics building was erected. The construction of the remainder of the building will begin early this fall. The plans call for a memorial social room in honor of the donor of $50,000; generous provisions for a nursery school; a library; and additional laboratories for art, food and clothing work.

The names and thesis subjects of the six students who completed work for the degree of master of arts in the home economics department are: Lillian Sensintaffer, Selection and the Economic Use of Soap in the Home; Mary Baynham, A Nutrition Problem with Special Reference to Negro Children; Mary Anna Lawrence, The Effect of External Temperature on the Basal Metabolism of Young Women under Usual Conditions of Dress; Rowena Schmidt, The Psychology of Child Nutrition; Laurel E. Davis, The Use of Soft Wheat Flour in the Making of Light Bread; Mrs. Lulu Williams Gillum, Color Knowledge Essential to Costume and Its Practical Application.

TEXAS

University of Texas. Jeannie Pinckney, who has been on leave of absence from the bureau of extension, will return as head of the division of nutrition and health education. Miss Pinckney was the recipient of one of the five $1000 fellowships offered by the American Child Health Association, and received her master's degree in health education from Columbia University in June.

Edythe Hershey, who was acting head of the division during Miss Pinckney's absence, has accepted the $4000 medical loan scholarship offered by the General Federation of Women's Clubs and entered Galveston Medical College in September.



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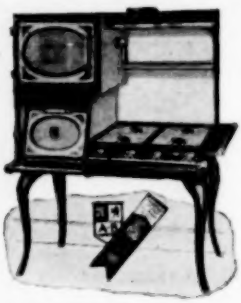

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GENERAL

Home Economics in Business Section Louise Fitzgerald, National Dairy Council, has gone abroad together with Aubynn Chinn of the Philadelphia Inter-State Dairy Council, to organize the work of the Dairy Council in England. They expect to return October 1.

Myra Jane Robinson is a member of the research and promotion department of the Hoover Company. In her new position she will be devoting all of her time to home economics education work. Her address is Box 225, N. Canton, Ohio.

Helen Louise Johnson is doing free lance work, and is located at the Women's University Club, 106 E. 52d Street, New York.

Elizabeth Cowan is life underwriter with the Equitable Life Assurance Society, in the Consolidation Bldg., at Indianapolis. She says she calls herself a 'financial diagnostician,' because a large part of her work is the analysis of people's money affairs and the planning of a financial program to meet their needs.

E. S. Weirick has charge of the programs for the homemakers' hour on Sears, Roebuck and Company radio station, WLS.

Ruth Leone Rutledge is with R. B. Davis Company, manufacturers of baking powder, in Hoboken, N. J., and is doing educational work along home economics lines.

Anne Pierce, for several years director of the New York Tribune Institute, resigned that position in June to become consultant on the merchandising of foods and household appliances with an office at 30 Fifth Avenue, New York.

Dietitian in U. S. Civil Service. The United States Civil Service Commission announces that applications for vacancies in positions of dietitian in the U. S. Public Health Service and the U. S. Veterans Bureau will be received until December 30, 1924. In the Public Health Service the entrance salary has been tentatively established at $1,020 a year, with quarters, subsistence, and laundry. Promotion is possible up to $1,600 a year. In the Veterans Bureau the entrance salary is $1,680 a year with possible promotion to $2,500. Where quarters, subsistence, and laundry are available, a deduction of $600 a year will be made to cover these items.

Applicants must have been graduated from a course of at least two years in home economics in a recognized college, such course to have included at least one year of chemistry, one year in biological science (including physiology and bacteriology), and one year in food preparation; also courses in mass cooking, nutrition, and dietetics. In addition, applicants must have had at least three months of graduate experience as student dietitian in a hospital or other institution for the care of the sick of not less than forty beds.

The duties of appointees will be to purchase the food supplies for all messes operated in the hospital, to plan all menus, both for patients on ordinary diets and diets with reference to special diseases, and the supervision of the preparation and serving of all dietaries in the hospital, both to patients and personnel.

Competitors will not be required to report for examination at any place but will be rated on their education, training, and experience on a scale of 100. On account of the needs of the service, papers will be rated as received.

Full information and application blanks may be obtained from the United States Civil Service Commission, Washington, D. C., or the secretary of the board of U. S. civil service examiners at the post office or custom house in any city.

UTAH

Delta Home Economics Club. The club was organized October 17, 1923 and had an enrollment of thirty-four members. The entrance fee was fifty cents. Myrtle Gustaveson was the first president. Meetings were held on every other Tuesday. Entertainments of the club included a candy-pull for members; a party for members and partners; a leap-year ball for the purpose of raising funds; a party in honor of the graduating class and basket-ball men. The following officers for the coming year were elected in April: president, Audrey Elder; vice-president, Melba Sampson; secretary and treasurer, Ireen Shipley; social manager, Quenn Allen.

A constitution was drawn up by the officers and passed upon by the members. At the close of the year the club had twenty-two dollars and eighty-six cents in the treasury.

FOREIGN

Constantinople Woman's College. President Kathryn Newell Adams sailed from New York late in August to take up her new duties at the College. Before leaving she said that she planned to emphasize training for home service, spoke in very high terms of the work Miss Murphy is doing in home economics, and expressed the hope that her services could be used in some kind of community work.

A recent issue of the *News Letter*, a monthly magazine published jointly by the Constantinople Woman's College, Robert College at Constantinople, and American University of Beirut, includes an article entitled "Home Economics Department Extends Its Activities" and a picture of the nurses in the home economics class. The young women are from the nurses' training school and wear the regular nurses' uniform with a large white apron, but the usual cap is replaced with the black or white tcharshaf or veil. On the wall behind them are the familiar charts of food composition.

British Nursery School Association. An interesting account of the conference held in Bradford, England, June 27 to 30, is given in *School and Society* for August 16, 1924. This organization was recently formed in the hope of counteracting the restrictions placed on nursery schools by the central educational authority. A statement was received from the President of the Board of Education expressing appreciation of such schools and readiness to consider sympathetically a proposal for their development. Such a proposal is to be formulated by a committee of the association. American nursery schools were well represented and Miss Hinton of the Merrill-Palmer School and Dr. Arnold Gesell of Yale University were among the speakers.

International Federation of University Women. At the biennial convention held in Christiania in July, Dean Virginia M. Gildersleeve of Barnard College, New York City, was elected president to succeed Prof. Caroline F. E. Spurgeon of the University of London.

Home Economics in Cape Province. A department of household science is being organized at the Huguenot University College, Wellington. The plans are being worked out by Miss L. Marguerite Mackenzie who appealed to the JOURNAL for information about the equipment and courses in similar departments in this country.

Pan-American Congress. In September, 1925, there is to be held a Pan-American Pedagogical Congress in Santiago, Chili. The United States Bureau of Education, at the request of the government of Chili, has asked the various educational associations to send delegates. This Congress is under the auspices of the Pan-American Union, and will be of benefit to those who go, in giving them an insight into the needs and accomplishments of the South American countries, and to the countries themselves in the information and inspiration carried to them by the visitors. Will not some one represent the American Home Economics Association?